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ABSTRACT

Twenty senior educators and nationals from Africa, Asia, the Middle East, the Americas, and Europe, met to discuss new directions in education for development. The agenda was bound by three broad themes: new directions and concepts in education to meet development needs; appropriate high technology; and new collaboration between donor and recipient countries. Six purposes consistent with the three topics were outlined: (1) to examine the criticism of current international development projects and policies; (2) to look at the question of greater collaboration between donor and recipient countries in the design and implementation of development projects; (3) to develop and recommend policies that may enhance the effectiveness of development strategies; (4) to outline areas for innovation and research; (5) to propose possible areas for institutional linkages between donor and recipient countries; and (6) to examine interdonor collaboration. Section one of the document summarizes several themes which emerged from the conference. Section two contains nine papers presented at the conference. Finally, section three provides transcriptions from the recorded comments of participants, without attribution, as a way of conveying the freshness and direction of thought. A list of participants and their addresses is included. (GEA)

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NEW DIRECTIONS IN EDUCATION

PROCEEDINGS from the MOTON CONFERENCE

April 1985

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ACKNOWLEDGEMENTS

Alvin C. Eurich

The Moton Conference on Aid to Developing Countries was in every sense a collaborative effort of two organizations, the Friedrich-Naumann Foundation and the Academy for Educational Development. The recognition of the need for such a conference grew out of a conversation between Dr. Juergen D. Wickert, who is the Foundation's representative to the United Nations and the director of its New York office, and the President of the Academy. Without the Foundation's financial support the conference could not have been held. Without Dr. Wickert's constructive suggestions during the development of the program, the selection of participants, and his contribution to the discussions, it would not have been as successful as it turned out to be. To Dr. Wickert and his foundation, all who took part in the conference give our warm thanks.

To the participants themselves, particularly those who presented the papers that are reproduced in this report, we owe a deep sense of gratitude. The success of the conference is apparent from the positive steps that have already been taken to improve collaboration among donor agencies in programs of aid to developing countries.

Foreword

A NEW COLLABORATIVE CONTEXT FOR DEVELOPMENT

Juergen D. Wickert

A complex combination of extreme contradictions burden and challenge today's world.

North and South are far away from narrowing the widely discussed and obvious gap of development in providing adequate human conditions for a self-determined life.

Thirty years after the Bandung Conference where the term "Third World" was first mentioned, millions of people have died of hunger, are suppressed, their human rights are violated, they are tortured physically and mentally, many do not have even the chance of hope.

Thirty years after the necessity of decolonization had been internationally supported and the largest international help programs had grown to never before known dimensions, the conditions for two-thirds of the world's population have still not reached any point of satisfaction.

On the other hand, help among industrialized countries after World War II, such as that granted to the Federal Republic of Germany by the people of the United States of America, was a tremendous success. The European Communities' development on a regional scale evolved from being former enemies of war to the largest economic power, overcoming its own North-South Dialogue slowly, but steadily.

Having well in mind that all countries, all societies, are in a constant developing state, it seems in a way logical that two non-governmental organizations of the two largest donor countries focus on ways to find new approaches to aid and to development only to be achieved in "A New Collaborative Context for Development."

In a context where most sophisticated technologies are discussed at large and the outcry by millions of their basic needs are merely heard, the Academy for Educational Development and the Friedrich-Naumann-Stiftung tried to organize a conference somehow different in both the content and the setting.

Development practitioners as well as theoretically-oriented personalities of both the so-called Third World and the so-called First World had to be invited to discuss the wide range of new approaches based on a humanitarian morale, on economic and social commitments including experiences of the past, and the challenge of the future.

The conference, therefore, was not to achieve new recipes for actual steps to be taken here and there. The conference aimed at a far deeper goal, one all too often neglected so far: understanding and confidence as a basis for development.

Second best choice only? No, not at all! International development is, after all, not a formalized ritual (e.g. the East-West conflict), but a process where people do matter with all of their deficiencies and advantages.

The design of this conference, therefore, has been strongly committed to balance in every respect.

Balance, to be understood as a target of success in development, is to be looked for; the combination of contradictions has to be seen as the relationship, in either a dualistic or dialectic way, of support and weight as a way to deep-rooted will for change.

The organizing committee of the Thirtieth anniversary of the famous Bandung Conference called it a shame that, after three decades, many of the developing countries are still not able to create a system which enables them to feed their people on the political basis of human rights. The same committee prepared the meeting in the spirit of our own efforts to development with a great demand for stronger efforts in internal politics and a low profile policy for international matters, asking the industrialized world only for a fair chance at participation in the various fields of the world's development.

Anticipating the anniversary of the Bandung Conference, it was the strong commitment of the Friedrich-Naumann-Stiftung to provide opportunities of all kinds to strengthen the North-South Dialogue, to continue the battle against injustice and to support the self-determination of the people, suitable to their own culture and beliefs, but suitable also to a peaceful living within this only world we have.

The Friedrich-Naumann-Stiftung was founded in 1958 by the President of the Federal Republic of Germany after World War II, Theodor Heuss, and Liberal friends. It was named in memory of the political aims of Friedrich Naumann, a leading Liberal personality at the turn of the century and a founding member and the first leader of the progressive Liberal party of the Weimar Era.

His vision of a Liberal society was determined by his belief in the individual and his abilities. He was convinced that a dynamic and living democracy requires the critical a[illegible]ctive citizen. The autonomous individual, aware of and capable [illegible]ursuing his rights, articulating his or her own interests and i[illegible]d in the political process was, for him, the Liberal alternative to control and the predetermination of need by the state and social institutions. It is to the furtherance of such ideas that the Foundation is dedicated.

The main emphasis of the Foundation's Third World program, a field in which it has been active for twenty years, are:

Sponsorship of self-help initiatives and organizations.

Activities are designed to promote self-reliance and cooperative action as well as to assist the establishment and enlargement of social organizations devoted to furthering equal opportunity.

Sponsoring of training for the media.

People of the Third World must have free access to information and be able to express their opinions freely. Through professional qualification the Foundation attempts to increase the trainee's critical abilities and commitment in preparation for a career in the field of journalism.

Sponsorship of civic education programs.

The Foundation supports measures designed to promote democratic structures and basic civil rights as well as to create the framework for involving citizens in the political decision-making process. It does this, for instance, through programs directed at opinion leaders, employees' associations or relevant research institutions.

Promotion of North-South Dialogue.

Through seminars and research projects the Foundation supports dialogue with partners in the Third World. The emphasis is on topics which serve to underline the necessity of democratic structures in Third World countries in order to achieve the goal of equality and self-determination of mankind.

These thoughts and commitments brought the Friedrich-Naumann-Stiftung and the Academy for Educational Development together in organizing this conference and future activities.

BACKGROUND

Twenty senior educators, each with many years experience in developing countries, gathered together for three days of open discussion on New Directions in Education for Development. The group included nationals from 11 countries of Africa, Asia, the Middle East, the Americas, and Europe, five ex-University presidents, four policy makers from international donor agencies, sectoral specialists in agriculture, health, and education, and more than 500 years of combined professional experience. Participants came as individuals, not as representatives of their governments or institutions. All used English fluently and articulately. The agenda was bound by only three broad topics:

New Directions and Concepts in Education to meet Development Needs

Appropriate High Technology

New Collaboration between Donor and Recipient Countries

Deliberately, no papers were distributed to participants before their arrival. Six purposes consistent with the three topics were outlined in the pre-conference packet:

1. Examine the criticism of current international development projects and policies.

2. Examine the question of greater collaboration between donor and recipient countries in the design and implementation of development projects.

3. Develop and recommend policies that may enhance the effectiveness of development strategies.

4. Propose areas for innovation and research.

5. Propose possible areas for institutional linkages between donor and recipient countries.

6. Examine interdonor collaboration.

Seven participants were asked to make presentations on different aspects of the three topics, but these presentations consumed only a small portion of the time available. Open discussion and interchange, anecdotes from years of experience, and questions from one participant to another characterized the conference's primary format.

Some conferees were fresh from battles within their own institutions to conserve and expand the role of education in development. Others were farther from the immediate fray, reflecting on experiences from other battlefields and other times. But all shared a dual conviction: education is important and education today is under siege.

This report attempts to document the results of the Moton Conference in three ways. Section I summarizes several themes which emerged from the conference in a prologue written by one participant. Section II provides the full text of the seven formal presentations. Section III provides transcriptions from the recorded comments of participants, without attribution, as a way of conveying the freshness and direction of thought. These comments cover a wide range of views and do not necessarily represent the opinions of the Friedrich-Naumann Foundation, the Academy for Educational Development, nor a consensus of the participants.

I.

HIGHLIGHTS AND HALLMARKS

William A. Smith

No summary could capture the full diversity of thought expressed at Moton. Moton was not a search for consensus, but a free exploration of alternatives. There were no "products" being sold nor ideas being doctrinized. Often one participant's comment would lead the group into new topics. Others' comments were summative and crystalline. Ideas were turned around, we were looking for a new facet. We voted on nothing. We disagreed often. As individuals we are enriched by the exchange.

This section of the Proceedings attempts to abstract topics, highlights and hallmarks of the 21 hours of discussion. Much will be missed here, but this reflects one participant's views on the issues which provoked general interest and discussion. It is no substitute for a careful reading of the formal presentations and, more importantly, for the recorded comments of participants in Section III, Voices from Moton.

Education for What and Who Decides?

This question lay like a mist over all of our conversations. At times we attacked it directly, often we avoided it as too ephemeral or as the responsibility of others. Some argued that unless we defined what we want education for, we could not define what we wanted education to be at all. There was agreement by many that education is an instrument of political will. Education is both conservative in its role as transmitter of societal values and transforming in its ability to provoke new ideas, "to teach students to dream," as one participant put it. In my view, we never came to terms with this dilemma.

Many participants took a practical view: we have a problem and we have to get on with solving it, using all means at our disposal. Others argued that this pragmatism, while well-intentioned, would almost inevitably lead to more failure unless it was guided by a purpose explicitly shared by society as a whole.

There was talk of a "will toward change" as a fundamental arbiter of success in development. Examples were cited of countries like Jordan, Singapore, post-War Germany, and Colombia where a transformation has taken place, where development has overcome

tremendous obstacles to thrust these societies into a new world. At the same time there was reflection on the substance of that new world. As one participant said, "development may mean simply exchanging one set of problems for another."

The role of education in the process of development was constantly challenged. Some felt that education was fundamental, almost apocalyptic in its power to influence the direction of change. Others saw education as a bit part in a play of immense proportions with economics, politics, and culture cast in predominate roles. They argued that we educators create our own problems by raising society's expectations far beyond our ability to deliver. The counterpoint was visionary. If education cannot solve all social problems, do not all social problems have an educational dimension? Is it not our responsibility, as educators, to address in some way all of society's problems?

This was our most philosophical theme. It provoked strong feelings and left us, as most "ultimate" questions do, with a choice of personal proportions: education as dynamo or education as respondent.

A Minimal Package of Excellence in Education

One of our most animated discussions centered on the idea of creating a minimal package of excellence which could be offered to developing countries as a survival kit for the next decade.

Reality was presented in stark terms. Student populations continue to grow at alarming rates, student performance either declines or stabilizes at unacceptably low levels, drop-out and repetition rates increase, and education's percent of the budgetary pie has topped out at 20 to 25 percent. The problems of education will continue to grow, the public resources to meet those problems will not.

Our response as educators has been, generally, to argue among ourselves about textbooks versus radio...teacher training versus new curriculum designs...higher education versus basic primary education...improve the formal system versus invest in alternative systems.... Parents despair and our colleagues in agriculture, health, and population turn away from us as impractical and contentious.

The idea emerged at Moton to cut through the discord, to set aside our differences and agree on a package of excellence, a set of practical innovations which we know now, after 20 years of experience, will make a difference. These innovations may not, in themselves, transform struggling educational systems into robust, creative, and

independent ones, but they will at least stem the tide, hold back the deluge until further research can help point out still more promising directions.

Several specific approaches were suggested as part of such a package: Unitary School Systems; Higher Student/Teacher Ratios; Lower Certification Requirements for Teachers; Double Shifts; Basic Literary, Math, Science skills; New Technologies, particularly Interactive Radio and Programmed Learning.

We did not attempt to discuss each alternative and determine its relative merits and set priorities. It was agreed that this was the job of individual countries. But we did agree that the package must be flexible, clear, and universally supported.

The idea of marketing such a package was discussed, marketing in a systematic and comprehensive manner, much the way innovations such as Oral Rehydration Therapy and the Green Revolution were marketed. This would require consensus among the donor institutions and a new approach to educational development not now part of the community's ethos. Bickering over fundamentals would have to be replaced with consensus on the basics. There was no agreement at Moton that such a consensus was possible, but several of us thought a minimal package of proper innovations could make an important breakthrough, leap over problems and open a new era of optimism in education.

There were also dissenters. Several argued that such an approach placed too much emphasis on the role of international donors. They suggested that these institutions contribute relatively little toward the overall expenditure on education in most developing countries and that the real solution lies in looking for new partners and rekindling old partnerships that have been allowed to decline. The collaborations among universities, the contacts among private sector institutions, and the role of corporations, particularly in the middle and larger sized developing countries, offer real hope of making a difference; more hope, these voices argue, than the slow and manipulative machinery of donor institutions.

Donor Collaboration: Good or Bad?

Should international donors cooperate more with each other? The old cliches about the value of donor collaboration were firmly challenged at Moton. While some argued that donor competition has often been destructive, others made a persuasive case against too much collaboration among donors. If donors always agreed, would they not exert an irresistible force on a given country, reducing still further the ability of small countries to set their own destinies and plot

their own courses for development? If donors concurred on a narrow set of priorities, might we not run the danger of pursuing wrong alternatives too aggressively? The past 20 years show as many failures as successes. To unify in pursuit of well-intentioned mistakes is hardly an admirable goal. Perhaps some competition among donors is useful, permitting small experiments to proceed and providing more influence by local decision makers.

But competition among donors can also be destructive. When two or three donors compete for the same counterpart, when they propose opposing solutions which stretch already delicate systems to their maximum, when they siphon off local talent through their programs of external training, when they invest large sums in similar and often redundant activities, are they not actually inhibiting the development of young nations who are often unable to say "No" to these valuable outside resources?

At Moton we agreed that both donor competition and donor collaboration can be destructive. New awareness of this contradiction seemed useful to most of us who had not fully considered the ultimate consequences of either alternative.

Technology: Promise or Pitfall?

We reviewed several new technologies at Moton: satellites, computers, interactive video, and many more. We reaffirmed that the diversity of such technologies is growing rapidly and that the costs of individual units are dropping almost as rapidly. The number of practical field applications in developing countries remains small, however.

There was also an emphasis on new uses for older technologies. Radio was discussed as one of the most promising new ideas, not because radio itself is new, but because new ways have been found to use radio in the classroom. Ten years of experimentation, sponsored largely by AID's Office of Education, has proven conclusively that radio can improve learning scores of isolated rural children in subjects as different as Math and English. Here the breakthrough technology is a scientific approach to learning, not a new gadget by itself.

There was both optimism and pessimism about technology at Moton. The optimism centered on the increasing durability, power supply independence, and low cost of the new generation of technologies. There was also a focus away from technology as gadgets, and toward technology's power to reeducate all of us in fundamental ways. Interacting with a computer creates a new culture, a culture in which precision, clarity, and order are mandated. The new

technologies help us think in different ways and do more than just perform simple functions we find tedious.

The pessimism was reflected by the practical remarks of several participants that went: "I'll never catch up. It all becomes so outdated so quickly. I have to scrape together scarce resources to buy a computer today, and tomorrow it will be outdated, and I will have no way to keep pace. In technology you will always be ahead of me."

The second concern was an egalitarian one. Yes, these new technologies can do wonders, but for how many people in our societies? How many computers can I ever afford, and if I give them to a few, do I further deprive the rest of my people of equity and opportunity?

A third argument centered on technology's role in the concentration or deconcentration of power. Here there was fundamental disagreement. Some saw new technologies as channels which more effectively concentrated information in the hands of a few, thereby giving them even greater power over the many. Others argued that the opposite was true. Small technologies were, for the first time, giving local decision makers the capacity to process and use information themselves.

The discussion ended with the clear recognition that technology is here, it is growing, its potential for good is at least as great as for evil, and it is our responsibility to see that it liberates and enlivens rather than replaces and enslaves our minds.

II.

PRESENTATIONS AND PAPERS

The following papers were presented at Moton as discussion starters. In most cases, the papers are edited transcriptions of the presentations made to the participants. These papers represent the individual views of each presentor and are not necessarily the views of the Academy for Educational Development, the Friedrich-Naumann Foundation or the presentor's institution.

NEW DIRECTIONS IN EDUCATION

FOR DEVELOPMENT

William A. Smith

The Problem

Of the 3.3 billion people living in developing countries, one billion live in absolute poverty. Two of every five are children under the age of ten. Seventy-five percent live in rural areas, the others in urban slums. Their average per capita gross national product per year is less than $200, as compared with $8,000 in industrialized countries.

Overall in developing countries, about one-third of the primary school age children are not in school. At the secondary level, this number rises to two-thirds. Only one in ten of the relevant age group attends any form of higher education. There are 600 million adult illiterates in the developing world, about a third of the adult population. And yet governments are now spending only 20 to 25 percent of national budgets on education; most observers believe the percentage will not grow. We in education are faced with the challenge: How do I do more with less?

These statistics do not reflect the progress that has been made in educational development over the past 20 years. And there has been progress, at least in quantitative terms.

From 1960 to 1975 the number of children enrolled in primary education in the developing world doubled, to about 236 million. In countries at the upper income levels of the developing world this expansion narrowed the gap between the numbers in and out of school. But the gap was not narrowed in the poorer countries and as a result the actual number of primary school age children not in school increased during the same period.

Enrollment at the secondary and higher levels of education expanded even more rapidly than at the primary level. This increase began from extremely low initial levels and, as we shall see, the improvement is small when measured against the potential need and demand.

While a consensus on the definition of "development" has not emerged, almost all critics recognize the importance of key economic factors:

Higher productivity in agriculture and other sectors.
Growth of small and medium-sized enterprises.

Increased equity of access to employment opportunities.

Equally important are social factors: better health, lower fertility, greater capability for participation in development at local levels. The interrelationship of social and economic factors is also recognized, such as improved health resulting from increased productivity.

The Role of Education

Education alone cannot meet all development needs. But a systems approach integrating the educational system within an explicit economic development strategy can contribute to balanced and equitable economic growth by creating a more skilled work force and a more intelligent consumer.

Clearly, education does not, and should not, contribute only to economic growth. Education has key roles to play in social, cultural, and intellectual development as well. But the problems of developing nations are such that contributions of this kind, without significant economic progress, will fail to break the barriers of unequal distribution of services and will frustrate legitimate aspirations for improved quality of life. Providing productive employment is among the most significant challenges to development planners. An increasingly skilled work force is required not only to expand "modern" sectors of developing economies, but also in agriculture and small to medium-sized enterprises. Literacy and technical/vocational skills are obviously needed for productive employment in manufacturing, urban service industries, and government institutions. Studies have shown that literacy and education contribute positively to productivity in agriculture and smaller enterprises.

Basic education and literacy also correlate highly with advances in key social factors, including health practices, fertility rates, and ability to participate effectively in development at the community level. And, of course, primary education is the foundation on which more advanced technical and vocational skills training rests.

Thus, there is growing consensus about a human resource development strategy in which basic education and skills training are emphasized, with links to economic growth coming through employment, productivity, and improvements in basic social development indicators which themselves are linked again to employment and productivity.

This general strategy should also be accompanied by explicit

mechanisms designed to increase equal access to education and its benefits for rural and urban poor and for women.

Basic Education: Improving Internal Efficiency

Development of a nation's basic education system is the cornerstone of this integrated strategy. The past three decades have seen a remarkable expansion of primary education. The challenge is to improve the internal efficiency of the system and to increase the already significant return on investment; if more classrooms are needed, better classroom experiences are needed even more. Special attention also must be given to increased access to education for women and disadvantaged rural and urban groups. Simple answers are no longer plausible. Improved efficiency requires a balanced three-part approach to changes in the education systems.

Better instruction is essential. Low quality education is significantly related to drop-out and repetition. Improvement requires attention to the basics of relevant curriculum, exciting teaching materials, and capable and willing teachers. Scarce resources also demand cost effective approaches, including new technologies such as microcomputer-based teaching and new uses for old technologies such as instructional radio. Alternatives to the traditional government primary school should be considered. These include private schools and the whole variety of nonformal models which have flourished during the past decade.

Decentralized control is essential. Increased local control of schooling can strengthen community interest and involvement, thereby increasing the value of schooling in the eyes of parents. It also helps the school adapt more effectively to local needs and conditions, increasing both the relevance and the quality of instruction. Decentralization presents practical problems for the traditional administrator, but ways have been found to deal with and overcome these obstacles.

Better management is key to a balanced approach. More effective educational management is essential to the better use of scarce resources and to the fundamental effectiveness of schooling. The dilemma is simple: schools without materials and teachers without paychecks do not pave the way for good learning. Among the areas requiring special attention are material distribution systems, alternative financing schemes, teacher payroll and advancement systems, and teacher supervision.

Progress in these areas will lead to a large number of better-prepared students. Literacy levels should increase. Better-prepared

students will be more easily trained and more adaptable to the changing demand for skilled labor. And better-educated students will be more susceptible to the responsible modernization of traditional societies.

Targeted Skills Training

The second half of the overall strategy follows from fundamental improvements in basic education. The goal is to develop a skills training capacity that coordinates with labor market demands, enables individuals to acquire the skills necessary to obtain employment and to continue learning on the job, and draws on a variety of new training institutions and opportunities. Targeted skills training requires action on four fronts.

Manpower planning is one important area. The shape of the vocational skills training system should be determined by the society's manpower needs, and hence, real employment opportunities. Manpower planning has long been a component of educational systems planning, but it assumes increasing importance and becomes increasingly challenging as the economies and labor structures of developing countries undergo increasingly rapid change.

This can shape the size of the educational system and the proportion of resources allotted to different technical areas and levels of training. But the **relevance of the system** is determined by more intricate planning which relates curricula to the skills needed for particular occupations or classes of work. These curricula must frame programs of learning that combine general technical knowledge and skills with specialized skill training for a particular job. This skills base is essential for continued on-the-job learning and for flexibility in rapidly changing job markets.

A successful strategy will **involve employers** in various ways. One of the most promising new ideas is the potential role of corporations and industries in providing not only job related training, but academic education and credentials as well. A recent book entitled "Corporate Classrooms: The Learning Business" by Nell P. Eurich points out that U.S. corporations are spending upwards of $40 billion to train and educate their employees and some, such as Rand, Wang, and Arthur D. Little, are offering accredited academic degrees. These alternatives represent a new resource for developing countries. In many countries it will be possible and desirable for employers to provide significant general and job-specific skills training. This will help ensure job relevance and additional educational resources. Coordinating bodies, such as industry/education councils, can help to

assure curricular relevance and employment opportunities for graduating students. Another approach is through specialized service agencies which translate job opportunities into curriculum guidelines and job demand forecasts which guide both skills training institutions and employers. This is particularly important for agriculture and small enterprises.

And, as with basic education, decentralized decision-making can be important, enabling skills training institutions to conform more closely to employment opportunities in a given region. This has the dual benefit of helping to attract industry away from capital cities, broadening access to jobs and helping stem migration to urban areas. Again, special mechanisms are needed to ensure disadvantaged groups equal access to education and training.

Alternatives and Schooling

There is continuing need for very low cost strategies to provide educational opportunities to youth and adults passed over by formal systems. Here, perhaps, communication technology used in various forms of continuing public and nonformal education can meet a serious social and economic need.

Since the publication of "Deschooling Society" in 1970, much has been written, dozens of projects have been planned, implemented and evaluated, and new concepts such as appropriate technology and family-based education have been annexed to the growing genre of nonformal education. Nonformal education is not a single entity, but a large collection of alternatives. At the heart of each nonformal program is the desire to make education more relevant, less expensive, and more joyful. The aim is to reach more people with better information in a more human way.

New ideas such as social marketing offer fundamental new ways to structure information delivery and positive behavioral change to widespread and diverse audiences. Adapting principles used to sell commercial products, social marketing focuses on the promotion of socially beneficial ideas and products. A social marketing project in Honduras, for example, reduced infant mortality from diarrhea by 40 percent in one year. These direct approaches offer real hope of large-scale change in relatively short periods.

Several tasks remain to be accomplished to support continued expansion of nonformal education. Three of these tasks are:

Specialized Evaluation Designs.
Nonformal education cannot be subjected to the

same evaluation criterion as schools. Drop-out rates and multiple-choice testing are inappropriate instruments for measuring the success of a community-based education program. New evaluation models must be developed and proven successful.

Large-scale Impact.

Nonformal education remains largely experimental. While hundreds of projects have demonstrated the basic feasibility of alternative education, only a few large scale projects have been mounted. Is nonformal education a successor to formal schooling or a partner in a new era of educational diversity?

Models of External Assistance.

Nonformal education requires innovation at all levels. Creative conceptual work is needed to define how nonformal education can best be supported by external funding agencies. Traditional foci of educational investment, such as school construction and teacher training, are largely inappropriate. For some nonformal educators any large-scale investment in infrastructure is contradictory to nonformal thinking. In addition, the administrative models of external support should be analyzed. Conflicts between vested interests at the national level and participatory needs at the local level often create difficult situations for funding agencies. A study of existing models coupled with an analysis of common problems would assist planners and funding agency personnel.

Systems Planning and Management

Strong systems planning and management capability is required to carry out any human resource development strategy. The basic education/skills training strategy is no exception and special demands are placed on the planning system because of its link to rapidly changing labor markets and its need to integrate curricula with employment. In many countries this will require strengthening existing educational planning offices as well as creating new mechanisms for effective coordination of training and employment. Systems decentralization of both basic education and skills training will require the development of large numbers of skilled planners and

managers to staff regional and local offices and coordinating institutions.

General Strategy Considerations

Central to the success of the basic education/skills training strategy will be strong and persevering policy support. Given relatively scarce resources, the size and complexity of the educational system, the absence of a tradition of collaboration between employers and educators, and the remarkable ability of education systems to resist change, the task will take years. Special effort will be required to educate national leadership and to obtain the long-term commitment necessary for success.

Moreover, significant and lasting change will require careful attention to institution-building. Planners will need to develop a clear image of the institutional changes and human skills that are required to carry out the strategy.

Finally, success will require a considerable willingness to explore alternative approaches in increased private sector involvement, new patterns of financing, changes in traditional pedagogy, new forms of decision-making, uses of educational technology, and a strong commitment to expanded opportunities for the economically and socially disadvantaged.

WHERE WE ARE

AND

WHERE WE OUGHT TO BE

Aklilu Habte

Education assistance in developing countries is perhaps the least researched development area. In the 1960s there was a euphoria for education assistance as bilateral agencies, multilateral agencies, and countries rushed into the developing world with programs and strategies, projects, people, and money. Now, in the 1980s, there is waning support for educational aid because it has not performed the tricks it promised.

There has been an emphasis on hardware for the developing world. New school buildings went up in rural communities, for example, and this kind of equipment and construction assistance had home-base support because it was profitable. Then came heavy emphasis on agricultural education, initiated by the Rockefeller Foundation, the Ford Foundation, the Agency for International Development, and the World Bank. Centers for research and training were established. The Consultative Group for International Agricultural Research (CGIAR) appeared and the efforts shifted to projects that would make research experience applicable. Comparable energy and resources went into tropical disease research and such pernicious problems as river blindness, malaria, and the diarrheal diseases began to be conquered. Development of essential transportation systems for people and goods began; the World Bank is making significant investments in this.

Today, however, there are very few regional or global centers of excellence for research in education and training. Exceptions exist, of course and we have IIEP, IEA, University of London Institute of Education, Institute for International Education, and Stockholm. Centers such as these help establish guidelines for developing countries in student achievement and teacher preparation, school construction, educational statistics, and employment. These are clearly areas which deserve further research from which we could learn useful lessons.

But there are a few broad and useful lessons learned in the last two decades. We need to keep them in front of us as we discuss collaboration and as our agencies and nations formulate agendas for the future.

We have learned through research and operational experience. Our first lesson from investing in education and research into the contribution of education to development is that educational

investment is productive. Education contributes directly to the growth and employment goals of developing countries. Education contributes indirectly by improving levels of health and life expectancy and by reducing fertility. There is ample evidence that schooling fosters the type of behavioral change that is conducive to economic growth. It is also a vitally important complement to physical investment projects. Spending for education is not simply consumption, but an investment in human capital and national productivity.

The second general lesson is that such investment must be broad rather than narrowly specialized and that basic education, including both primary and nonformal education, is just as important for development as is high level technical education. The body of evidence in support of this conclusion has been summarized by the World Bank's External Advisory Panel:

> General education is at least as important to development objectives as specific skill training and is, in fact, a necessary complement to the latter. The point can be illustrated by the results of recent research showing a positive three-way relationship among farm productivity, agricultural extension, and primary education: new agricultural technology is adopted more rapidly and effectively among farm populations with at least four years of primary education than among those with less schooling. More broadly, the complimentariness of general education and skill training is essentially related to the rapid changes being experienced by those who live in developing countries. In such a world a combination of general education and skill training is necessary to qualify persons to be able to adapt to change and to take part in it usefully.

Further, the quality of schools in developing countries greatly influences the quality of the graduates, more so than in developed countries. We have learned that the question is "how" rather than "whether" to invest in education.

The third lesson learned is that early emphasis by both donors and developing countries on methods of forecasting skilled manpower requirements has given way to careful analysis of manpower patterns, including the way educated workers are used in the labor market. As a result, more emphasis is now placed on tracer studies that follow the progress of the educated in the transition from school to work rather than on methods of forecasting which assume rigid relationships

between manpower and output levels or firm-based studies of the modern sector which exclude the rural labor market, the self-employed, and the unemployed.

Our fourth lesson regards the internal efficiency of education. Extensive studies and research in Chile, Peru, the Philippines, Uganda, and elsewhere point to the importance of school textbooks and show that improving the availability of textbooks may be one of the simplest and most cost effective ways of improving school efficiency. Quality of teachers, for example, is another vital determinant of pupil performance, and it is generally more important than class size. And, extensive analysis of distance teaching methods has demonstrated that radio may increase the internal efficiency of education by producing lower rates of wastages and repetition and lower unit costs.

Education costs and financing yields our fifth lesson. The rapid increase in educational expenditure that took place in the 1960s and 1970s has slowed in both the developed and developing world. The pressure for expansion and qualitative improvements continues unabated. Thus an urgent need has arisen for a reappraisal of both the patterns of costs and the financing of education. Because the costs for a university student per year is proportionately very much higher in developing countries, poor countries that invest heavily in higher education must shoulder an enormous burden. When unit costs of education are compared with national income, the financial burden is even heavier. Despite growing concern, it is clear that there is no simple way to reduce costs. Only the most careful scrutiny of costs in relation to what is achieved will ensure that developing countries get the best value from scarce resources.

Lastly, there is a lesson to be learned regarding the equity implications of educational investment. This has attracted increasing attention since the early 1970s. As a result, it is widely believed that educational investment must be evaluated according to two criteria. The first is the distribution of educational opportunities and facilities between different social groups, geographical areas, and rural and urban populations. The second key criterion is the distribution of financial burdens and benefits of education.

The national and international response to these five broad lessons must address four issues. Attention must be paid to recurrent cost financing. There must be technical assistance for educational management. There must be planning and management for building capacity determinations. Research and evaluation must continue.

We cannot ignore the links between education and politics. Educational activities are derivative of political decisions. What we must do, therefore, is remain aware of this and provide options for

decision makers to consider and include in their public policy deliberations.

BEYOND THE COPPER AGE

Clifford Block

I have labeled this talk "Beyond the Copper Age" and, indeed, I think we are well into crystals and transistors. Perhaps we can call ours the Silicon Age. It is, in fact, a fundamental change I think the world is going through.

Before I talk about high technology though, let me just go back for a minute to what is probably the lowest technology we have, radio. A lot more information is going to be made available very soon and descriptions of the various projects using radio for classroom instruction in mathematics, English, and science will be available from USAID. A lot of what we learned, together with many countries over the last ten years, with regard to radio is equally applicable to other technologies, such as satellite broadcast and computers. The issue is not really a technological issue. The issue is how educational institutions can cost effectively utilize these technologies. Much was learned as we were forced in the last decade to apply a low cost technology such as radio to education. More has been learned from the radio experience about how institutions can effectively adapt these new technologies than in previous work with the more sophisticated technologies alone. The radio expertise is quite generalizable.

Well, let me proceed to a short overview to set a stage for our discussion about what some of these technologies are and where they are, at the moment, in terms of the developing world. Growth in communications and information technology is something fundamentally different from our past experience. Communications technology has helped to generate an enormous ferment throughout much of the developing world. Characterized as the "new world information order" or the "new world information/communications order," planners and thinkers in many countries believe that something new is happening. They believe that the developed world is on the edge of something important and, unless the developing world rather quickly gains mastery of the use of these new communications technologies, they will be left further behind. Let me focus on education and put aside some of the broader, though very important, issues.

What we might be able to agree on initially is what we think about the context of education and how it may change in the next decade or two. While it is very difficult to predict what is going to happen in most areas, what we do know is that information technology and communication technologies will grow apace. We know that costs will go down because they have been going down dramatically. We know that the ability of communications to reach virtually every place on

the globe will grow rapidly. We know that the growth in microcomputers and other kinds of computer technology, in terms of information storage, will continue. Now the challenge is, within this virtual certainty, what can educators do to take advantage of that context?

Well, what are some of these technologies and where are we now? Let's start with satellite communications. What we are talking about is what satellite communications can carry, what kinds of services they can bring as a result of their space segments and increasingly low cost ground segments. They can bring television broadcasting. They can bring telephony to rural areas. They can bring an ability to conference and link users throughout the region and throughout the world. They can bring data and text networking.

We have heard about satellite communications for a long time now. Indeed, many of the studies were begun in the late 1960s. India's study, for example, began nationwide television broadcasting by satellite in 1968. There are studies done in Latin America at about the same time. We have heard about it for so long that we may not realize that what has seemed to be tomorrow is here today. What has happened in the last year alone, actually in the last ten months, is that satellite communications systems for national coverage, not just for international linkages but for national coverage of rural areas, have opened up developing regions containing over one billion people. Within the last 12 months, India sent up its own satellite which provides a national broadcasting service for television, radio, and telephony. It permits any village to set up a small earth station with a small antenna connected to a television set, at a total cost of somewhere between $1,000 and $2,000, and pickup the broadcasts. Many of you are familiar with the context of the Indian village and to think of that potential suddenly coming is startling.

Brazil just a few weeks ago launched its domestic satellite. We have seen a second generation of Indonesia's satellite go up and made available for national communication within the other countries of Southeast Asia - Thailand, the Philippines, Malaysia, and Singapore. The League of Arab States just this year put up the Arab satellite covering all of its more than 20 member countries with an ability to reach small earth stations anywhere throughout the Arab world as well as to provide telephone links from country to country in that region. Australia just decided last week that it would provide a service, starting in 1986, to the countries of the South Pacific...so isolated, so many thousands of small island with small populations. And in the near future there will be further developments. As I said, more than one billion people potentially can be reached by these systems.

The situation in Africa is not yet clear. There have been conferences and studies carried out this year. Projections suggest that a satellite system for Africa could be provided that would replace expensive two-way telephone communications to thousands of sites on that continent at a cost of $25,000 per earth station. Radio reception costs are very much lower, in the range of $1,000 or there about. But, as I said, the situation for Africa is not yet clear. There are rumors that the French have secured one of the satellites that was dumped out of the space shuttle and may provide service for Africa. We have not really heard whether that is true or will come to pass.

Now we come to the issue of utilization. What can be done with these technologies? Here we have to look at the specifics. First, let's recognize that you do not need satellite broadcasting to make a difference in education. In China, for example, the Chinese television university, a distance learning system, sprang up about four years ago. Within a year, without satellite broadcasting, it had an enrollment of one million. Other open universities utilizing television, and some of them radio, are springing up around the world with huge enrollments. Indonesia is just beginning such a system. But you add satellite communications and the potential for large countries becomes even greater. Indeed, for all countries the possibility of sharing specialized educational television broadcasting becomes more practicable and cost effective with satellite links.

Telephony, which may seem to be somewhat remote from our concerns at this conference, offers the ability to provide interactive instruction and information for people who do not have the information they need. Consider the situation of rural workers in health, education, and agriculture and the potential that this kind of telephone system may represent by linking them to sources of information and with each other. We have begun a little bit of experimentation in this vein with Peru, where a satellite system is now in its second year of pilot operation linking a number of communities, some of them good-sized market towns, others small communities connected through satellite telecommunications for just this kind of conference.

With audio conferencing in general the potential for education may be very great. By audio conferencing one simply means having a party-line telephone call by satellite, or not by satellite if there are alternatives, among classrooms. There are two experiments going on now where we at USAID and the Academy for Educational Development are involved in trying to explore this kind of application. One is in Indonesia and the other is in the Caribbean. In both cases the rooms are just about like this, except that there are a few more microphones

and speakers.

In Indonesia they link agriculturally-oriented university campuses scattered over a huge area, eight campuses with each other and with an agriculture research center in another part of Indonesia. They use audio lectures and what's called the electronic blackboard. If I were giving this lecture in Indonesia I would be writing on a metal pad that would serve essentially as a note pad. I would have the notes displayed on a television screen in each classroom in Indonesia that was listening within thousands of square miles. Any student in each of those classrooms could come up to the blackboard and, in effect, ask a question, write a note, or whatever, and have it displayed to me, the teacher, and to other students in the conference. A truly interactive system. By using telephone lines it is relatively inexpensive. And that, of course, is the point.

There is a similar system operating in the Caribbean where the regional university, The University of the West Indies, is utilizing this kind of capacity to reach students who otherwise would have to try to get to the main campuses of the bigger islands for their education. Of course many can not. This kind of model, I think, represents a potential for educational organization at the higher education level that may be quite profound. In Indonesia, for example, it would permit one university to specialize in one subject area, life sciences for example, while another would specialize in aquaculture, and another in chemistry or health. They would not have to create at each university site a full-scale faculty expert in everything. Regional institutions, with expert teachers located throughout the regions who teach through a two-way communication link with students throughout the entire area, are made possible by this kind of new technology.

Finally, there are important administrative applications of these new satellite communications technologies. Data networking and text networking are proving very powerful. In fact, what has been found in several experiments in Indonesia and the Caribbean is that university administrators most appreciate the ability to provide written material electronically to other campuses for administrative purposes. Electronic mail has been perceived as a blessing in areas where transport of printed material is unreliable and chaotic at best. The positive impact on administrative systems has been a rather unintended, but apparently fairly profound, result of this kind of activity.

Let me move quickly to the other two technologies. The computer age is upon us. Consider that eight years ago the first Apple computer was produced. It was made in the garage of Steven Jobs and Stephen Wozniak, who predicted at that point that they could sell

one thousand of the machines and make themselves rich. The first one sold in 1977. Today there are two and one-half million Apple computers and millions more other microcomputers at hand.

I have a micro I carry around. In it I have 15 pages of text of a paper I am struggling to get finished. Whenever and wherever I have a little time I write a paragraph or two and it's stored in there. I have programs that tell me what I should do, or what I have not done. When I get bored with all this, I have a set of games that came with it. I can play blackjack; I lose to the computer. This is an Epson and it is just a wonder. It has a little printer. It will produce text that I can read instead of text I can't read...and it is already outdated!

It is not produced anymore because it is archaic. It sells for $800 and, as I said, it has already been outdated by a computer that has four times the memory capacity, that has a much larger display, that has built-in programs for word processing. And the new one is also about to be outdated by one that will sell for $500. And note that in terms of cost projections, a computer like this that sells for $500 now will within two years sell for half that price.

So, the computer age is upon us and costs are plummeting. The question is, how can this technology be used in education? I do not think we know yet. The exploration is really just beginning. We have done a little bit with a few countries. Specifically, we are working on a project with Dave Evans, and using even smaller, specialized little products called "Speak and Spell" and "Speak and Math," designed for preschoolers in this country. It was used in schoolrooms in Lesotho in an attempt to upgrade mathematics and reading performance. It did, and of course the children loved it. Those little devices retail at about $40 apiece.

I think there is a difference between computers and other technologies because computers are so interactive. If the program is even half-way good it is absolutely intriguing. It does not have to be forced on people. Quite the opposite. In American schools demand has come from teachers and students and parents to bring microcomputers into the schools because they are inherently enticing.

From an educator's standpoint the real power, I think, as we look to the future of computer applications is our ability to introduce into educational computer programming the best that we know about the learning process. In fact, it imposes a discipline. When one is making a television program or a radio program, one has the luxury of being unclear. We never really know, none of us know, whether anyone is getting what we intend to communicate. With the computer program you do not have that luxury. When a computer program is unclear the user stops and can't go any further. When the user is

unclear, the computer program may stop and not be able to continue without clear and correct input. That is very valuable feedback to us as educators. Indeed, with computer programs it is very easy to track the progress of students throughout the learning process. In terms of educational science and all the underlying sciences of cognitive psychology and other areas, the computer holds enormous potential to begin to transform the learning interaction.

We are beginning a little exploratory project with cooperation from a few countries. Over the next few years we will begin to experiment with various computer applications to find the niches into which they fit. It is clear that costs are still substantial and it is going to be a while before the niches are found. It may be that my conviction that the efficiency of learning will be enhanced extraordinarily will be confirmed, but we do not know that yet. It is my belief that we will find students learning twice as fast with these technologies, even with the computer programs that are available now. If this is so, then attention as to how to utilize and make these instruments cost effective will definitely increase. But very sparse resources are being put into it now. The French, as you may know, have established a world center. They are pursuing experiments, one in Senegal and another one, I understand, in South India where some 10,000 microcomputers have been made available for educational purposes. We hope others will do more.

Now let me wind up this little tour of new technological wonders by talking just a bit about the educational management applications of microcomputers. Another Academy for Educational Development expert, Kurt Moses, has been working with Zimbabwe and using IBM PC computers to assist that country in educational planning and budgeting. In fact, very simple tasks like the grading of examinations, which can cause huge problems and delays, did cause serious political problems in Zimbabwe until last year. A few IBM PCs were put in. It is a remote system with PCs scattered around the country so that tests can be scored where the students have been taking them. Test scores are then transmitted back to the central Ministry.

A little bit in the future, but not very far, is the potential of the video disk. I know that there have been some of our colleagues at the World Bank who have been looking at video disk applications to training. I do not know how many of you have seen video disk. It is quite extraordinary and the hybrid of microcomputer and video disk can bring to the learner a combination of computer-based instruction and television instruction recorded on the video disk. It has enormous capacity for the storage of materials. It has the capacity to shift, depending on whether the student has performed correctly or not, to

different instructional sequences.

One experiment involved with the University of Nebraska and the Government of Indonesia has developed a video disk/microcomputer application for teaching physics and chemistry laboratory. It is really quite a wonder to see. Instead of going through the first week of chemistry lab...actually, every time I tell this story I look at my scars from the broken glassware and the utter confusion in my mind during the first week in chemistry lab...the computer simulates it for the student. It gives simulated liquids in simulated test tubes and asks students to find out what the liquids are. And then it provides simulated chemicals; you choose which chemicals you want to pour in, you see the color change, you see it bubble, etc. on the monitor. If you do it wrong, the computer goes back a step and gives you a little more information and you try the problem again. The computer does not give up on you, as my lab instructor gave up on me. It is a dramatic illustration of the potential for that kind of application.

The storage capacity of these things is absolutely staggering. And there is a new compact disk that is going to become available within the next two months that will have, believe it or not, the capacity on one disk to store 500 megabytes of information. Now, that is 500 million bytes of storage, or 2,500 pages. The compact disk players are going to start at $1,000 and, rather quickly, should go down to $500. So the potential not only for education, but for having information generally readily available throughout the world is essentially here now.

These are some of the potentials that the technological world and the information geniuses behind it are providing for us. We don't really know how to use these new technologies in education yet. They will have to be adapted to the realities of developing nations, the cultural realities and the physical realities. But there is no question that they can be made to teach effectively. That question has already been settled for many, many applications that can be made available right now. The questions are institutional and adaptive and there may be a role for external agencies in working with developing nations to help explore this tremendous potential. I'd be curious to know if these promises seem real and, if so, what might be done to capitalize on them?

EDUCATIONAL TECHNOLOGY:

A DISCUSSION SUMMARY

Clifford Block

Let me try to briefly summarize. We began by agreeing, I think, that information and communication technologies are becoming pervasive, whether we like it or not, and the technologies are coming very rapidly, reaching even the most remote parts of the developing world. The potential seems enormous. In education there are many levels using satellites, microcomputers, and other, less sophisticated technologies. We also pointed out that there are negative consequences. The inherent changes produce risks and potential negative consequences. The task is to develop those uses that are most appropriate, most affordable, and hold the least risk for developing countries who don't have the resources to take those risks.

Technology is not enough, another thing that we have agreed upon. Educators must take control of this technology and learn how to use it in a way that is really appropriate. But it does, in fact, now help teachers and students in the countries at hand. Technology can drive the use of those appropriate applications but it cannot determine their use. Donor nations can be of some assistance to educators in the developing world and strengthen their hand as they deal with the entities that often control technologies like satellite telecommunications. Donor nations will come in and say that local educators need to be given more of a voice in the utilization of this sort of capacity.

There were many concerns expressed, many anxieties. Anxieties about the rate of change and the difficulties of coping with that change, the potential centralization of power from some of these technologies versus the supposedly decentralizing aspects that microcomputers in particular may represent. Concerns were expressed about the dependence on Western nations for software and expertise as well as hardware, especially by the poorer countries and countries with less of a human resource base, concerns about homogenizing cultures and the potential impact of having common programs available, concern that technology must be locally as relevant as possible.

All of these added up to the clear call for efforts to develop the local mastery of these technologies for education. At least one thing could be agreed upon. Donors may have an important role in helping to build local capacity, human resource capacity, and institutional capacity. Perhaps they can do this best as part of a broader activity, in terms of helping build capacities for educational resources, educational analysis, and innovations that include new

technology. We agreed absolutely that the control capacity must rest at the local level. Information about options can be something that the international donor community can help with.

We turned to the problem of collaboration and, I think, many of us got depressed and we agreed that it was very difficult. There are many agendas and bilateral agencies, foundations, and countries and multilateral agencies have different economic, institutional, cultural, and procedural interests. But there are also some positive examples. We cited examples from agricultural research, the health area, the aerospace fund, consortia of donors, the new India/U.S. Research Foundation, etc. Once again we agreed, I think, or not quite agreed perhaps, that the individual recipient countries are the key to donor collaborations.

Donors at the same time need to encourage collaboration and encourage those people in those countries who do not exert the discipline on donors to in fact collaborate. Such collaboration must, in any event, be focused on reducing competition which is destructive, particularly for those rare people who are the agents of change in a country.

Again, I think we concluded that building local capacity is the way to accomplish that. To increase the local capacity is the way to begin to build a capacity for collaboration that is determined by the nation itself within its own objectives and goals.

As we began to focus again on technology and other issues, we noted that solutions must be created in and for the developing nations by developing nation people. We noted that more information is needed in almost every area and especially in the countries themselves where decisions are made. There is a whole network of gate keepers of development activities that will grow as the world changes and possibilities and options open up. There is an enormous educational and informational job that needs to be done so that all of those who are key people will be capable to both make appropriate decisions and reject the inappropriate.

Finally, we focused on the terms of what we have not yet discussed and, I think, set a fine agenda for future discussion. Among the issues are other linkages beyond donor institutions, such as universities, new developmental models, technical assistance versus self-reliance, issues on education for people in crisis, for developing professionals themselves, and fostering creativity at the indigenous level. Intra-African cooperation was described as a priority.

Throughout, I think we touched on issue after issue where there was a search for something new, some kind of breakthrough and, indeed, we were talking repeatedly about communications issues and

information issues. As we talked about linkages, as we talked about education, as we talked about collaboration, we were, in my view, talking about communication.

To go back to the start of the day, I think we have to keep in mind the reality that these new technologies are more than gadgetry. They have a real potential to change access to knowledge from scarcity, with the control that scarcity implies, to abundance. Information can be abundant. The potential impact on almost every one of those problems we discussed is enormous, if we can work together.

THE THRILL OF HIGH TECHNOLOGY;

THE AGONY OF EDUCATIONAL REALITY

IN THE CLASSROOM

David R. Evans

Intoxication with high technology is increasing. It began with radio and then television and the potential that these mass media had for delivering uniform high quality content to students throughout a country, particularly one without sufficient qualified teachers and supporting educational materials. As the pace of technical innovation quickened, we progressed to programmed learning, to satellite transmission covering whole regions of the world simultaneously, and now we are well into the micro chip revolution which promises a computer for every classroom or even every child.

With each new technology the scenarios for its applications to solve the educational problems of the developing world multiplied rapidly. Donor agencies eagerly embraced each technology and helped to fund pilot projects and sometimes large-scale applications, convinced that this technology would prove to be the breakthrough which would cut the Gordian knot of educational development. Whatever the technology, the potential benefits to education were claimed to be enormous. Such claims were a strong enticement to supporting the latest technological application to education and sufficiently large to quell suspicions that perhaps it wouldn't really work that way.

Think back through the technologies of the past 30 years: the fanfare of the discovery of the possibility; the speculation about its potential impact on education; the pilot models; the enthusiasm for widespread adoption as reasonably priced models appeared on the market; and the inevitable discovery of the limitations followed by disappointment and disillusionment with the reality when the technology was used in real classroom settings.

Reminisce for a moment. What is the earliest technology you can remember? Is it dustless chalk for an erasable board, flash cards, filmstrips, 16 millimeter film projectors, reel-to-reel tape recorders, overhead projectors, reading machines, ...? Can you remember the enthusiasm of the promoters of each of these, the claims of the marvelous changes they would cause in the classroom? Do you remember the demise of these technologies? You don't, because old technologies don't die, they are replaced by a new technology which drives out any thought of the old and its fate. Hope springs eternal with each new technology and each new class of teachers and administrators.

As each new technology rises and falls, its life in the United States and Europe is followed at a distance by the same cycle in the developing countries. Each new technology finds a champion in one of the development agencies and becomes the focus of a technical assistance project. As the activity level of the development agencies has increased, the time lag has shortened until today we find technologies being introduced in the Third World shortly after they make their first appearance. While the capability and willingness to apply new technology to development problems has increased, so too has the rate at which each new idea is abandoned after its introduction and trial.

Some of these efforts have been very substantial, with careful planning, large investments of resources, and willing acceptance by local educational systems eager to make the new technology work. Unfortunately, the results have been largely disappointing, a failure to capture to any meaningful extent the promised benefits of the technology. Merely mentioning the names of countries to professionals in the field is sufficient to conjure up memories of the demise of significant projects: American Samoa, Alaska, Guatemala, Ivory Coast.... While not every case can be judged a failure, even modestly successful examples are notable exceptions to the general experience.

Does the glory of the technological promise ever escape from the agony of the reality of untrained teachers in primitive schoolrooms with no educational resources? What have we learned from 30 years of technological development and application? Should we ever be hopeful that even some of the promise can be realized in the context of educational applications?

The Importance of Being Humble

Perhaps the most important lesson we can learn is to admit that we don't know how to effectively apply technological innovations to large-scale educational development problems. That is not to say that we don't have any understanding of what is needed for effective use of technology in education just because we do not know many things. And under special limited conditions we can make educational technology highly effective. We do know many of the principles involved in effective application. But we continually overestimate our ability to create and maintain these conditions in the context of school systems in either the developed or the developing world. Or, we succeed in making a system work on a pilot basis only to discover that the costs are far too high to make large-scale applications cost effective.

Look at the schools in the developed world. Where do you find any large-scale use of educational technology? If you visit a typical American school today, what educational technologies would be commonly found? Would there be educational radio, language laboratories, computers, educational television? With a few noteworthy exceptions, the answer would be no. The most common technologies remain the blackboard, the textbook, the mimeograph machine, and, perhaps, the film projector.

Now, think quickly through the technical assistance projects of the past decade or so. What educational technologies were we working hard to introduce into the educational process in developing countries? They were educational radio, educational television, satellite transmission of television broadcasts, and computer-based instruction. The technologies which we have worked so hard to transfer to the developing world are not used in schools in our own countries. We are promoting technological solutions which are not appropriate at home and with which, in fact, we have little practical experience. We expect the developing countries to do things we can't and won't do in the developed world!

Despite this situation, our approach to the use of technology in education has been the same as in agriculture or urban development, areas where we are transferring technologies which we already do use extensively. We can't transfer experience which we don't have. Once we admit this to ourselves, we may be in a position to work with colleagues in the developing world to find realistic applications of technology to educational problems.

What Was the Question, Anyway?

Too often we have been part of a phenomenon which can accurately be described as educators with technological solutions roaming the world looking for problems. We all know that the right approach is to start with the problem, not with the answer. Rather than picking up the latest technology at home and creating an artificial scenario about how it might be used, let's begin with a real situation in a developing country's educational system.

The third theme of this conference is collaboration. Here is a strong reason to collaborate: if we don't collaborate effectively with the users of the technology, our solution won't work.

Let's begin, on site, and collaborate to define carefully the educational problem we wish to tackle. Having defined the problem, we must look carefully and realistically at the context in which the technological solution must survive. What organizational, managerial,

and staff capabilities will we be able to find or create with a reasonable amount of training? What infrastructure will be available to support the technology? How will the technology be maintained? How reliable will it be? These are all fairly standard kinds of assessments. However, those assessments are usually made by external experts whose task is to support the introduction of the new technology and their assessments are often much too optimistic.

Equally important are the more subtle human factors. What kinds of changes will the new technology require in the traditional local ways of doing things? The most successful innovations are natural extensions of these ways. Central broadcasting of radio or television education programs for use in schools is a good example. The benefits are clear and the potential improvement of instruction substantial. But what kinds of human and organizational changes are required? In addition to all the effort required to produce and broadcast the material, there are less obvious organizational factors needed. Each school, every classroom, and every teacher must be ready and waiting, with the receiver turned on and the kids prepared, at the same time everywhere in the listening area. Anyone who has ever spent time in rural schools in a developing country knows how unlikely this is! I don't say it is impossible, but it is a large step from current practice to the needed standards of preparation and punctuality.

The prospect of designing new technological applications in direct response to jointly articulated needs is exciting. Let's try to use technology in ways it hasn't been used elsewhere, design the solution on location. Combinations of centrally broadcast radio and extensive use of local audio cassette recorders can provide a good solution to many problems. Central broadcast makes good material widely available. Use of cassettes gives individual teachers options for timing, pace, and sequence of lessons. Such technology is locally available, readily understood by users, inexpensive, and easily repaired or replaced.

Or, consider applications of the micro chip. One's first thought is microcomputers and computer-based education. But wait...that is following the old path of sending the developing nations technologies we don't really know how to use at home. Consider instead such hand-held microelectronic learning aids as "Speak and Spell." Relatively small investment makes possible production of ROM chips programmed with material for use in a developing country. Then consider innovative ways to use them in schools, within current organizational contexts, with only minor changes in classroom procedure. Development of such technology should and could take place in the country of application, working directly with educators and educational institutions of that country.

A very different pattern of innovation would result. While engineering would still emanate from centers of scientific research, which now includes many Asian countries, applications would be developed directly in the Third World. On-site solutions have a much greater chance of success. Dissemination would follow naturally. Fairly soon, I suspect, the developed nations would discover that they could learn from the experiences of the developing countries. Technology transfer would begin to reverse. Rather than resisting or feeling threatened, those of us in the developed world should welcome the revitalization and enrichment such interaction would bring. In my opinion, this pattern would demonstrate true collaboration from which all would benefit.

Technology as a Human Problem

What can we conclude from this brief excursion into the world of educational technology? We can put up satellites, build ever smaller, more powerful, and more portable receivers of information, and create a myriad of micro chip-based devices capable of manipulating information. But none of this technology is directly useful in solving educational problems. The challenge in making successful use of technology lies not in the technology and its associated hardware, but rather in the utilization of the information available through the technology by human beings in human organizations. Educational problems are human problems, not merely technological challenges.

To some extent this can be thought of as the distinction between hardware and software, the difference between putting up a broadcasting station and producing the programs to broadcast. But the difference is greater than that. Both of those tasks are still handled by professionals, often expatriate ones, and not by ordinary educators who are going to have to make use of the results in the classroom. The real challenge comes at the school level where the information received via technology must be utilized to promote learning. This is the level which has received the least attention from specialists, and it is the level where the whole process is most likely to break down. Resources and professional expertise focus first on hardware, then on centrally produced and controlled messages, and last on issues of local utilization. The exceptional projects which have had greater success will, I think, be found to have broken out of this pattern by emphasizing utilization at the level of the learners.

The need to be humble extends to the group of consultants and

professionals sent to assist in technology development projects. These people have been trained in the developed countries and naturally bring with them standards of professional excellence derived from applications in those countries. But this very professionalism can often result in blindness to local conditions, reluctance to hear what local practitioners are saying about conditions at the point of utilization, and exclusion of nationals who haven't had the same level of professional training. Not only does this raise issues of control and access, but it often guarantees no more than limited success for the project because programming and technology are created to meet international standards of excellence developed for use in settings with quite different needs and infrastructures. Professionalism should be defined by a commitment to process, participation, and genuine collaboration, not by rigid adherence to a set of international standards relating to hardware and types of programming.

The potential of the latest high technology is dazzling, and too often blinding. We shouldn't deny the glory possible from interactive video or megabyte laser disk storage devices, but we can avoid the agony of failure only if we balance the search for the all-powerful solution with a firm commitment to the principles of effective problem solving. Appropriate high technology is technology which can be effectively used at the level of the learner under practical conditions. Collaboration means working together to create new solutions to problems defined at the source by the users, not transferring answers from one setting to another. Professionalism is a commitment to listening, sharing, and jointly solving problems using whatever level of technology seems most likely to work under local conditions.

We do have some knowledge and useful experience to bring to the problem solving process. We do have a good deal of technical skill and an ever increasing set of powerful devices. What we need most to develop, though, is a sense of humility about the limits of our abilities.

FROM COLLABORATION, TOWARD ENGAGEMENT

Ruth K. Zagorin

The topic given to us at this meeting is different in a very significant way from the way in which collaboration is often perceived. More typically, we discuss the issue of donor to donor collaboration. What we have been asked to discuss here, however, is collaboration between donor and recipient countries.

I apologize to the conveners of this meeting for omitting the word "new" in talking about collaboration, but I believe that the concept of "new" may not be the best. I think it may even divert us in a way that is counterproductive. I would be very satisfied if we could do better with the efforts which are already underway rather than attempting to think in terms of new institutional mechanisms which promote collaboration. The idea of collaboration is difficult. Collaboration conveys an idea, the notion that it is desirable. I believe that our discussion has led us to question whether collaboration among donors is always desirable. Collaboration among donors may go from the relatively simple sharing of information to the much more complex effort of joint funding. It doesn't matter what level you are talking about, cooperation and collaboration are very, very difficult.

Donors, both multilateral and bilateral, have their own agendas. Certainly they have their own culture and surely they are driven by different operating procedures and different goals. Furthermore, as we have found particularly in Africa, they are often competing for very limited opportunities and sharing information therefore becomes very difficult. As we know, if one donor is aware of a good idea it is not likely to share with another donor. The fear is that a fellow donor may be much more energetic, more aggressive, and might be the first to pick up that particular project. The fear is that all of the preliminary work would be lost. The competition is real, it is not a myth. We are competing for very limited opportunities.

Furthermore, we are competing for very limited local human and institutional resources. For every donor attempting to do work in developing countries there is a counterpart. If there are 20 donors attempting to work in the Ministry of Education, there is still only one Minister of Education. The pressure is on the Ministry. Unfortunately this competition does not lead to cooperation, and that is one of the reasons why "cooperation" and "collaboration" are often spoken but are much more difficult to put into practice.

Why do we all support collaboration? I presume that we

support collaboration because we believe it should lead to more productive uses of donor resources.

A question not often asked in the donor community (we are very inward looking when we discuss donor collaboration) is: What role should the host country play in promoting collaboration? For some reason the assumption is always that collaboration among donors is a donor responsibility. I would like to suggest that perhaps we ought to speak this morning about the role of the host country in promoting or limiting donor collaboration.

My own experience is limited, it is mixed. I do find, however, that in dealing with developing countries some governments do not believe in donor cooperation because they do not believe it's in their interest. There is an often expressed fear that the combined weight of the donors might really give the donors a very unfair advantage compared to the limited resources of the developing countries. I have heard developing countries express the feeling that they don't want donor collaboration. They are much more comfortable playing one donor off against the other. They care much more about their own goals. By not having to combat a unified group of donors speaking with a single voice they feel more self-determined. Perhaps, as we explore the issue of donor collaboration, we ought to ask whether collaboration of donors is truly in the best interest of the developing countries.

However, on the other side you could also cite examples of some countries who have done a fine job of disciplining donors. I have used the word "disciplining" advisedly, in part because this is exactly what it takes. These governments foster the sharing of information and they bring about what appears to be some better order to that part of development activity in which the donors are associated.

Although cooperation and collaboration are very difficult, donors publicly recognize the importance of collaboration. They all have found that they must say, "Yes, there must be more collaboration," and, "Yes, we must find a mechanism to collaborate." But when push comes to shove collaboration is very hard to achieve.

There have been some astonishing examples of collaboration with remarkable results, but these are very particular groups. One is the Consultative Group for International Agricultural Research (CGIAR). This is something which was first discussed in the fall of 1969. It became a reality in 1970 and it has been operating successfully since 1971. The resources which have been made available have grown many, many fold. It is a very unique organization, an organization without an organizational structure. It is a consultative group. It has no by-laws; they never take a vote. There is no pooling of resources. The World Bank took on the responsibility

for providing the secretariat which did the organizing, setting of meetings, and so on. The Food and Agriculture Organization of the United Nations took on the responsibility for the technical aspect of the activity and supported the Technical Advisory Committee. The CGIAR has continued to function in this way. It meets twice a year. It supports many centers. It is doing a most remarkable job. Each government which participates agrees on an overall budget for all the centers. Each government determines for itself into what center they will put their resources, with the World Bank and USAID being donors of last resort. That is, if any center does not get sufficient resources from the group of donors, then either the World Bank and/or AID will provide the resources for that center. That is one form of collaboration, a remarkably successful one.

A similar effort, not quite as successful and organized somewhat differently, is the Tropical Disease Research Network for which the World Health Organization of the United Nations is responsible. It was started in the mid-1970s. The organizers identified the most critical tropical diseases which were not getting enough research attention. The donors agreed to provide the resources to allow research to go on. One of the interesting differences between the Tropical Disease Research Network and the Agricultural Research Network is the fact that the agricultural research is being done in established international centers. In the Tropical Disease Network the research is going on in established institutions both in the developed and developing countries. The operational mode is slightly different, but again it is another example of cooperation among donors.

Another mixed bag, mixed in the sense that it works better for some countries than it does for others, is something which the World Bank initiated some years ago. This is the consortium of donors which was established and chaired by the World Bank in order to provide maximum assistance to India. It has spread so that many, many countries now have a consortium of donors, chaired by the World Bank or bilateral donors, which meets at regular intervals. It varies from country to country in an effort to gather the resources that are necessary from the donors to provide resources to that particular country and a commitment from the government. Again there is no pooling of resources but, nevertheless, there is a targeted amount and there is agreement that this amount will be achieved. I have sat in on some of these and they are fascinating. The recipient country participates, makes a statement, and justifies the support it is requesting. These are very serious discussions and the donors then

indicate what it is they think they will be able to provide for the country in the coming year. It has worked extraordinarily well in some cases.

I think the question I would like next to throw out is: If we are going to talk about donor collaboration, should we be talking about donor collaboration in the broad, general sense without any clear definition of what it is we want to achieve, or, should we concentrate on donor collaboration for specific purposes?

I would be remiss if I didn't discuss collaboration between donor and recipient countries. I must admit, I wasn't quite sure what was meant by the conveners. It is my view that, in fact, collaboration between the donors and the developing countries does exist...I would suggest to a greater extent than we perhaps recognize or are even willing to admit.

Each multilateral and bilateral agency has a very lengthy program planning process. Sometimes it is discouraging that it is so lengthy, but it includes significant dialogue with the countries. I am aware of this in three agencies. I know this is true with AID. I know this is true with the World Bank. I know this is true with CIDA, the Canadian International Development Agency. In addition to the general program planning process, there is also a very lengthy project development process. I think that in the project development process the dialogue is greater than it is at the program level. But, certainly, it does include the country. Occasionally there is the accusation that dialogue includes the country too late, after the project is too well formulated, rather than giving the country an opportunity for input in the very early stages of development. But some collaboration surely does exist.

I do think that the process often falls short of our hopes. You have to recognize that the country doesn't often have enough of the kind of information needed to dialogue productively with the donors. Secondly, as I pointed out before, the Ministry staffs are too often terribly overworked. We are one donor meeting with the government, but the government has to deal with ten, 20, or 30 donors. That is a serious burden imposed on governments. Often depending upon the donor sector, the government itself doesn't have a clearly articulated goal. Perhaps it is much easier to accept what the donor offers rather than argue for what the country believes it really needs. There is another problem. Donors' goals and donors' advice are not always consistent. It is left to the government, the leaders, to sort this out. I raise a question for us to consider later: What can the donors do to assist the countries to exercise what I believe is their responsibility, and that is to orchestrate collaboration?

I would like to cite one example of a project AID has undertaken in which a side benefit will be to help countries

orchestrate collaboration. AID has undertaken a comprehensive human resources sector assessment. This is part of an effort to provide the countries a document, a road map, in the human resources area. It will allow countries to use their resources more effectively, but it also will allow them to say to any donor: "This is where we are coming from. This is where we are going, and, if you are willing to put your resources to further our objectives as stated in this plan, we welcome it. If you are not prepared to do this then we are going to have to discuss it. We are not going to accept, for example, new school buildings that a donor is prepared to provide when, in fact, this study indicates quite clearly that we don't need new school buildings for another decade. What we ought to be doing in the next decade is working on quality."

There is another effort that remains and which responds, I think, to some of the issues that we have been raising about human resources development. AID is now taking a very strong stand on training. The Administrator feels that perhaps the best investments that the agency can make are in additional training. Some of us have been very concerned that the training that has been going on has been useful, but ad hoc. Training has typically been project-oriented. You train two or three people for this project, or a half dozen for that project, without taking into account three or four other skills that are critical. If you train two or three people in this project, is the support capacity out there that's going to make it possible for them to function in place, or do we need some kind of critical mass? What are the other donors doing? AID is not the only donor that is training. The Bank is not the only donor that is training. The Germans, the French, the British, everybody is doing something. What do we know? What does AID know when it decides it is going to train 30 people in a country? What investments is the country itself making? What we are suggesting is that each AID mission produce a country training plan, a five year country training plan to find out what the other donors are doing with regard to training, what the country is doing, etc. We feel this will bring some greater order into both AID's training and perhaps into the training needs of the country overall. It is a minor effort, but we think it may be useful.

A third thing which I believe the conveners set out for our discussion is the issues surrounding technology. I am a little concerned that we have too quickly eliminated a generation of advanced technology for the developing countries. This is a real issue, and one which has to be dealt with. How do we maximize the benefits of the technology? It's there; you can't stop it, and even if the donors argue against it, the donors play a very minor role. If we are not prepared to introduce the technology, it's coming in anyway. It's

coming in legally. It's coming in illegally. It's coming in the front door. It's coming in the back door. It is coming in whether you are paying tariffs or it's being smuggled. It is just there. The question that we face is how do we maximize its positiveness and how do we minimize it's negative impact?

Resources for this kind of investment are going to come not from donors but from the private sector. There was a recent article in The Washington Post, "Ghandi Solicits Foreign Investment in India, Urges Collaborative Projects to Make the Nation Competitive With the Developed World." I would just like to quote:

> Prime Minister Rhaviv Ghandi today invited foreign businessmen to invest in collaborative projects here that could help make India industrially competitive with the developed world in high technology and other areas. He was speaking at a roundtable conference of industrialists in 27 countries sponsored by the European National Forum. Ghandi said that his government is committed to opening up Indian industry to competitive pressures in the interactive technology with the world marketing industry. The goal is not only to overtake other developing countries but also to challenge developed nations. The Industry and Company Affairs Minister told the group of businessmen that political stability, economic soundness and debt management in India offered the best climate for foreign collaboration and that India would benefit from acquiring sophisticated technology. It was in our mutual interest to promote and encourage partnerships between India and foreign companies so that the economic, technological benefits would share in the spirit of cooperation....

And the article goes on.

I quote for an obvious reason. The developing nations are going to have to look to the private sector to take advantage of the development and use of high technology for their countries.

I would like to conclude by suggesting that in the areas of high technology the potential lies outside of the prism of the traditional donors. I must add the following caveat. The donors still have a very important contribution to make. The donors have to help build the institutions, the universities, the research parks, invest in the human capital that will make it possible for the

developing countries to absorb and utilize technology, not only absorbing and utilizing technology, but also to generating technology. Surely what is in the mind of Prime Minister Ghandi is not simply to absorb what comes in from the outside, but to generate new technology.

I will finish by saying that collaboration and cooperation are presumed to be good. But I think important questions remain. Why are they presumed to be good? If it is determined that they are good, then good for whom, and, how do we discern who benefits? And, how do we make certain that through collaboration and cooperation all benefit?

CONSENSUS, CONTINUITY, AND PROCESS:

THREE ASPECTS OF OUR DILEMMA

Stephen Moseley

Dr. Alvin C. Eurich, President of the Academy for Educational Development, asked me to contribute a few words of background about the Academy's international activities and offer some comments on the subjects we are discussing concerning new directions for collaboration in educational development. My comments are an attempt to reflect upon our own work and methods of operation as an educational development service and their relationship to the significant challenges which face many of us from all types of agencies carrying forward educational assistance for development.

The International Division of the Academy is primarily a service organization which assists Ministries of Education, Agriculture, Health, and Information, among others, as well as particular educational institutions, including universities. Almost all of our efforts are conducted in developing countries. We have four principle themes of activity:

Human Resources Development
Transfer of Technology
Institutionalization of Innovation
Improving Access and Equity of Opportunity.

We attempt to meet these broad objectives by providing services on a project-by-project basis in direct collaboration with the personnel and agencies in the countries where we have been invited to work and in collaboration with the donor agencies which support this work. We normally serve in 30 countries each year and, over the past 15 years, we have served 86 countries through some 200 projects. All of the work, as the name Academy for Educational Development suggests, falls in the broad realm of education, but I must note that what was once almost exclusively a focus on the formal education sector has become a much broader concern with education, communication, information, and training in other sectors as well. The work ranges from Higher Education Institutional Development to Basic Education Teacher Education in the Formal Education Sector, to work in Vocational/Technical Skills Training, Agricultural Extension Education, Health and Family Planning IE&C, Development Communication and Telecommunications, and Cultural Exchange. The services include research and evaluation, planning and design, operational assistance, training, information services, media productions, and computer systems planning, as well as foreign student long- and short-term

placement and program design. The work is conducted primarily by a regular staff of 130 people together with an active group of consultants, and often major programs are carried out in partnership with universities and other specialized development organizations.

In my professional lifetime, the past 20 years, we have seen educational development efforts move from a pedestal of unquestioned value as an essential ingredient for economic and social development to constant questioning and often attack in many governments and agencies, both in the developed and developing countries of the world. This challenge must cause us to examine our ways and means of conduct and how and to whom we represent the role of education in development.

We come to this conference on education and international development at a rather extraordinary time, because we can now measure and see dramatic positive changes in the developing countries and, at the same time, see the enormity of the problems which still must be addressed. To provide some sense of this, let me cite a few of the figures on both sides of the ledger for the past 20 years.

Positive

1. Economic growth; production is twice as much per person.
2. Life expectancy has increased by one-third, or 16 years.
3. Infant mortality is about halved.
4. Literacy rate is now up to 50 percent, from 23 percent.
5. School enrollments (ages 6-11) are up to 64 percent.
6. The IDA lists 24 countries which have graduated into the next echelon of countries eligible for lending by World Bank standards.
7. Communications and other infrastructure developments have proceeded at a remarkable pace, although telephones, roads, agricultural source facilities, etc. are still predominantly in urban or suburban areas. Radio is available to about 80 percent of the world population.

Negative

1. One-fifth of the world population, 600 million to one billion people, remains in abject poverty.
2. The international debt burden of many LDC's threatens to disrupt their own and the world economies.
3. The disparity between the North and South remains enormous.
4. Population growth rates in many LDC's threaten the progress being made.
5. Education budgets have decreased dramatically in donor agencies and the proportionate investments by government have decreased.
6. The education pyramid remains very vertical beyond the lower levels of Basic Education.
7. Curricula, trained teachers, support materials, and other essential

ingredients of quality education are scarce.
8. There is frequently disharmony and misunderstanding between the education sector and other sectors where there is need for education methods.

It is difficult, if not impossible, to very precisely relate the educational development service efforts during the past two decades to this ledger, and I shall not attempt to do so here. I would like, however, to suggest some areas which educational development assistance services need to address to both meet the considerable needs for assistance in the future and to address some of the causes which may be eroding the confidence in educational development assistance. I have identified three aspects:

1. Our tendency to be our own worst enemy.
2. Our tendency to avoid planning for success.
3. Our tendency to minimize the importance of how we deliver educational assistance.

By **our tendency to be our own worst enemy** I am referring to what appears, to many, to be a constant changing of direction and the impression that we convey of being against the education establishment itself. During the 1950s and 1960s, a great deal of our energy and resources were directed toward higher education, to the development of significant new institutions, and to the need for highly trained manpower. Quite abruptly, we made a shift toward the rural basic education level and, at the same time, introduced a debate among ourselves about the merits of formal versus nonformal education methods and practices.

Most recently, much of our literature, investment, and services show a turning away from nonformal education, and while there is a renewed emphasis on basic education, it is one which emphasizes skills training. There is, concurrently, a renewed emphasis on higher education institutional development. I am not suggesting that there have not been and are not sound reasons for these changes in direction or emphasis. But if we stop to think about how our changes are perceived by the on-line policy makers and educators in the countries we serve, it is not surprising that each change in direction may signal our abandonment of yet another aspect of education.

In the case of the education development specialists' debate about formal and nonformal strategies, they themselves came to recognize that there was not so much the need to emphasize the

distinction, but rather that both can and should be interwoven in one education fabric. However, to those responsible for the administration and management of Ministries of Education and their personnel, particularly teachers, we the experts were often perceived as desiring to "deschool" the very systems we wished to help. We used the negative term "nonformal" to describe what we tried to convey as positive alternatives. Likewise, in the rush to improve the elements of the formal education system, be it teaching methods, curricula, learning materials, classroom structure, and so forth, we advocated "reform" and usually "total reform." This is very often translated by those already part of the education system as our advocacy of revolution and reform against them. While such reforms may be clearly needed, we quickly alienate the very managers and teachers we depend upon to act as agents of change.

This description of events obviously telescopes and exaggerates both our behaviors and those of our fellow educators. It does not reflect our intentions. I do suggest, however, that we often fail to adequately realize that our well-intentioned plans and actions for change may well contribute to impeding change.

Similarly, in our attempt to offer services and methods for education and training in other sectors, such as agriculture, private and state-owned industry, health and population, there remains a very profound problem of communication between those sectors' professional leaders and those of us in the educational assistance sector. While there is a growing recognition of the importance of education, information, and training in support of development goals in these sectors, including agricultural extension, family planning IE&C, and public health and education, relatively few education development specialists are able to communicate professionally across the discipline barriers. We find this is so in the countries where we serve and in donor agencies and service organizations where the different Ministry or sectoral personnel remain significantly isolated from one another. Here we, the educators schooled in the arts and sciences of communication and learning, find it difficult, and usually impossible, to learn the jargon and enough of the substance of those other disciplines to be able to effectively make our own skills available to work in partnership with the personnel in those sectors.

To renew and revitalize the role of assistance in educational development, I suggest that we need to carefully examine how our own behavior and efforts affect the perceptions and attitudes of those with whom we expect to collaborate in our daily work. There is a television advertisement in the Washington, D.C., area which says, "The educated consumer is the best customer." We need to couple that notion with our need to more fully educate ourselves about the

attitudes, behaviors, and expectations of the potential consumers of our educational development efforts. We need to understand not only pupils, but teachers, administrators, and parents.

We can take concrete steps to avoid alienating those we want to serve:

1. In our design of programs, we can listen more to and enlist the participation of those groups we feel are most likely to frustrate our efforts. Those may be teachers' unions, classroom teachers, parents, community representatives, and specialists from other sectors.
2. During the conduct of projects, we can more fully enlist such groups and representatives in formative evaluation.
3. We can require ourselves to study the substance and language of other sectoral problems.
4. We can more fully communicate and discuss the reasoning and rationale for the changes in direction and emphasis in our programs.
5. We can consciously ask ourselves how we are being perceived in offering and proposing such new directions and educational innovations.

The second concern I want to address is what I label: Our **tendency to avoid planning for success.** Much of our work in educational development assistance is really applied research in which innovation and sometimes new technologies are being tried out with the expectation that they will demonstrate a model which can be expanded to a larger scale within a country, or may even be transferable from one country to another. We like to measure the extent of our success in providing educational assistance by its expansion to additional populations and geographic coverage, or by its adaptation to another setting. Do we though, in fact, in very many instances include in the initial program or project plan activities and strategies which will encourage and enable expansion or adaptation to succeed?

My own career has been made up of a series of project events, most of which have been carried out with the objective of pushing forward the state-of-the-art, new educational methods, and new means for delivery of education and information. With very few exceptions,

at the end of three, five, or seven years, the rigorous evaluations of those projects indicated success: X number of people have been trained or educated, Y efficiency or effectiveness goals have been achieved, and the tools and methods of the approach have been well-documented, packaged or preserved in some sense. In too many cases, the project effort has been continued only on the same scale by our colleagues in the country, not improved upon.

Over these years we have developed a storehouse of success stories and compiled a wealth of knowledge about what seems to work, or not work, in a particular setting. This experience at AED, I know, is multiplied many times over in similar groups, profit and nonprofit, OVO's, donor agencies, and, in particular, departments or ministries in the countries where projects have been conducted.

Yet, in many instances the successful new projects and approaches have not led to dramatic adoption or adaptation to nationwide uses, or to use in neighboring countries, or to major changes in development investments from one agency to another.

In most educational development projects, once the project has been designed and implementation has started there is little or no involvement of the very bodies that will usually determine how the results can be used for further development. Are the key decision makers in donor agencies, in ministries, in service agencies, and legislatures that determine finance and, in some sense, the direction of educational development efforts, involved during the progress of the project? Are they asked at project mid-points whether or not they agree with or understand the nature and purpose of a project? Or, do we wait until there are mountains of data which so reinforce our own belief in the success of the project that it may be impossible to hear what they say? When we do present the results to the decision makers in another country, is the speaker for the project's success a credible representative? Is it someone from the country in which it is being carried out so that, say, African is speaking to African, or even teacher to teacher, or minister to minister? Or do we more often attempt to have the external specialist try to convey the message, only to find that he or she is treated as an outsider?

Let me cite two examples which seem to illustrate the transfer of knowledge from successful projects. Last year I visited Lesotho with one of my colleagues, a North American who has been working in Kenya in an experimental program using radio-based approach to improve early English language arts in the first three levels of primary school. Six months earlier, he and a Kenyan colleague from the project had conducted a seminar about the project at the Ministry of Education in Lesotho. I asked if there has been any outcome of the seminar, was this approach one that interested the Basotho Ministry

personnel? The response was extremely positive, and the question was how soon could the Kenyan, Mrs. Margaret Ojuando, return to help consider this further? One of the Basotho later told me that the idea of having one of Kenya's professional project staff in Lesotho,not just the technical advisor, was a much more credible means to introduce the new methods.

Another example spans a ten year period. In 1976 I visited Colombia and had the opportunity to be invited to the Radio Sutatenza Complex of the APCO program, then headed by the very charismatic Father Salcedo. My presence was happenstance. The important guests for the occasion were Ministers of Information and Education from Venezuela who had been invited because the Venezuelan government had been protesting that the radio waves and messages were going across the Colombian border into Venezuela. This was the first meeting between the Venezuelan officials and Father Salcedo, and there followed a three hour discussion, not directed by Father Salcedo but by the group leaders and children in the ACPO program. In early 1985, nine years later, in a conference in Mexico, I heard the Venezuelan government representative talk about the successful adaptation of ACPO Colombia to Venezuela which began with and has grown from that meeting nine years ago.

These two projects, RLAP in Kenya and ACPO in Colombia, are very different in origin. One is Kenyan government and USAID supported, the other primarily initiated by the private Church sector. Both have shown dramatic results in their original settings. I expect that the opportunity for adaptation and reconstitutions of such programs in other countries will be dependent not just on the donor and implementing agencies, but through the perceptions of the local users and participants in those programs as they are given the opportunity to convey the story to people who have similar cultural and/or ethnic backgrounds.

The theme of much greater regional and national self-reliance and exchange among trusted compatriots and neighbors is one which must increasingly pervade our work in the formulation and delivery of educational development assistance, whether in the realm of project design, implementation through technical assistance, training programs, or, most especially, as such programs involve new technologies and other approaches which very directly challenge the status quo. We learned in the 1960s and 1970s that almost any project or effort labeled "pilot" or "experimental" was doomed to failure, primarily because it was often implemented outside the real setting in which its results would need to be later attained through expansion or replication.

seminar, was this approach one that interested the Basotho Ministry Today most new projects have appropriately been launched within the actual setting of a ministry and their costs have been thoughtfully

projected, at least theoretically, to see if their experimental costs can be afforded in the ongoing operations of a country's budget. Though there have been, not unlike some pilot programs, some disappointing conclusions, we would be foolhardy not to continue to invest in and conduct projects which lead, as many do, to new knowledge and understanding of improved ways of providing education.

What appears to be increasingly important is that we more thoroughly plan in advance the ways in which we expect the results of the project to be utilized, disseminated, and adapted. Where results are expected to be transferable across borders, we should expect early on in a project to encourage the participation of those from other countries. Even at the design stage multinational review and planning teams might be considered. Within countries where a smaller initial investment is expected to spread if successful, there needs to be more regular participation along the way by those who later review the final results. Projects with significant support for original design and implementation should require new and creative designs and investments for their dissemination both during and after a project is implemented.

Sources who are credible need to participate in such dissemination activities and more than only the most senior government representatives should participate. At the project design stage, the economic analysis of a project's projected affordability needs to be realistic and to recognize potential settings in which a larger program might operate. Too often the analyses, while theoretically sound from the standpoint of the economist or cost analyst, may not make much sense to the manager, legislator, or other user of the innovation who brings many more practical factors to the question of what is affordable in an operating budget.

In short, we must strive to ensure that the plans for projects and programs include in the heart of their design some concrete answers to the question, "What will be done when the project is successful?"

The third and final theme I would like to address for our discussions is our tendency to minimize the importance of how we deliver the educational assistance and to concentrate upon designing projects on the substantive ideas or innovations of a project.

Here I am referring to the need to question and examine more thoroughly the usual formula of project inputs, a formula that rather simply specifies X amount of T.A., Y amount of in-country training, and Z amount of external training. It is true that this formula has been modified over the past two decades to include more attention to counterpart ties, greater use of trained technical advisors from the

country or region being served, a greater emphasis on the use of indigenous or third-country training institutions, and a far greater emphasis on short-term training.

Still, little attention has been paid to the ways, means, and methods to better ensure that technical assistance personnel are fully effective. Little attention is given to ensuring that training investments, whether internal or external, are effectively integrated into the program. In the writing of project designs, 90 percent of the effort is usually devoted to the analysis of the problem and explanation of why the innovation will effect the desired change. In fact, I would suggest that at least equal attention needs to be given to designing more precisely and creatively how technical assistance, training, and other inputs to the program are to contribute.

For example, while we may describe in some detail the scope of services for technical assistance, do we offer methods for the individual advisor or consultants to use in meeting his or her tasks? Most advisors' key job is to transfer skills over time to a counterpart. Our selection of the person is based on some combination of technical and personal skills and experience. Do we often enough, however, determine if that person has training skills, or even that the scope of services clearly defines the important training function, and then see to it that there is adequate time available to be devoted to this key function?

With respect to arrangements for training, there has been a welcome new emphasis on support for both short-term specialized training programs tailored to key individuals in programs and to a renewed emphasis on utilizing training resources to concurrently build up land institutions. Too often however, I would suggest that the training elements or investments in programs are carried out relatively independently from the core focus of the program itself. Integration of the elements of technical assistance and training is seldom adequately planned or emphasized in the actual implementation or operation of programs. As the costs of external technical assistance, already high, become unbearable, we must now begin to seek new ways to deliver educational services.

What this suggests is that the very significant investments in technical assistance, usually on a one-to-one counterpart basis, may be more useful and cost effective in the long run if there is a broader training emphasis, one which not only relates to a few key people in a particular project but which also establishes and transfers ideas and technologies through the strengthening of a local training institution.

An extension of this idea of widening the breadth and the role of the individual technical advisor is addressed in a recent World Bank document by Lauren Cooper, in what she calls "The Twinning of Institutions, Its Use as a Technical Assistance Delivery System." She speaks of the system as an effective means of transferring know-how, training staff, and building up effective management capabilities. The principle emphasis in the twinning concept is that of improving the tie between specific technical assistance and training. In a sense, by linking the capabilities of a mature organization with one at an earlier development stage, the opportunity is offered to transfer skills seen and learned in one setting to another, without depending on a single technical assistance advisor. Most instances of twinning are found in the industrial or public works sectors, such as port authorities, municipalities, university development, etc. taking this form of joint venture.

A number of the examples cited in the World Bank publication include a sequence of steps, such as the assignment of several key employees from the developing country institution to the "twin" mature institution to work inside and find particular methods, approaches, and training programs which might be adaptable to the home institution. Those methods, technologies, and materials are then taken home and, with intermittent assistance from the partner, are introduced and used in the new institution or program.

For development educators this is not a new phenomenon when we think of many of the university development programs initiated in the 1950s and 1960s, or even some more recent successful attempts in fostering joint degree programs between established universities and local institutions in a developing country. Those examples are still spreading and there are new variations on that theme which could be cited.

What this approach suggests, and borrowing from the university development model, is one which could be applied to a variety of educational and training endeavors, including civil service management training, departmental educational reforms, or perhaps overall Ministry of Education management and planning efforts. I think, for example, of some of the current program efforts in several African countries which are addressing at once many elements of an educational system, including management, supervision, records, superintendence, in-service training, materials development, and evaluation. Usually the approach is to provide a series of long- and short-term advisors, to somewhat independently link that effort with the long- and short-term training of training staff at widely dispersed institutions of higher learning abroad, and to develop all materials and new courses for country training within the country being assisted.

Could we imagine the twinning of a Ministry of Education with a state or large county system of education in the U.S., or with a district in another country which offers the opportunity for on-the-job training, skill-level specialists, relevant short-term TA, and a resource of materials for possible adaptation? Such an effort is considerably different from the linkage of a university's faculty of education and a Ministry of Education, in which it is presumed that on-the-job skills needed can be drawn from the setting of a university. Perhaps some combination of both is ideal.

Among the advantages of such an approach are:

1. The operating experience of the mature institution in similar functions.
2. The opportunity to integrate training more fully with TA.
3. The likely opportunity to alter the workplan collaboratively and to develop institutional cooperation.
4. The ability to take advantage of a greater supply of expertise.

With respect to the external training element of the usual inputs formula few of us, I suspect, would question the overall positive contributions which investments in external training have made in the past. At the same time all of us, I also suspect, are concerned about the often and apparent mismatch of training which abounds, even when such training was originally planned to further an individual's ability to more successfully do his or her particular job.

How often have you heard the rationalization that when the individual returns with a new degree or advanced training and quickly leaves the position for which he or she was trained this investment is not really lost because that person is contributing to the nation's development in some other way? That is clearly true, but when most of us rank leadership and top management as the necessary ingredient for successful programs, we wince when we see the very leadership of a major program disappear shortly after return from training. The specific training investment may not be lost, but it may very seriously jeopardize the success of a much larger program or project investment. Clearly, one can not and should not limit the opportunities of the individual. Yet, should we not seek ways to more likely ensure that the external training experience can be tailored to encourage and contribute on a more long-term basis to the program and project infrastructure?

Some examples with which my colleagues have had successful experience include programs in Sri Lanka and Indonesia. In Sri Lanka an agricultural education and institutional development program has provided training of young faculty through the Ph.D. level in a wide variety of agricultural disciplines. For each discipline we have established a linkage between an American land grant university and a sister department in the Sri Lankan institution. The young Sri Lankan faculty member is required to spend a minimum of one year in his or her new position at the Sri Lankan institution. Then, over a period of two and one-half to three years, the faculty member completes course work at the U.S. institution. The young faculty member in residence at the U.S. institution is tied to one of the TA advisors to provide orientation to that advisor and ensure that the advisor, through his or her TA experience in Sri Lanka, is better able to advise and guide the young faculty member in the U.S. The young faculty member is required to spend 18 months for field research and dissertation preparation back in Sri Lanka upon completion of course work.

During that period the student is provided guidance by a senior Sri Lankan faculty member recognized in the degree process by the American institution. Also, the senior U.S. home campus advisor spends one to two months in Sri Lanka during the student's field work to both oversee and provide specified help to the student, as well as to provide other TA or consulting services to Sri Lanka.

The returning trainees have a much stronger tie to the development program through this tailored approach. There is improved competence and commitment by the technical assistance to the institutional development program in Sri Lanka. An additional result is the development of closer collaborative institutional ties between Sri Lankan and American professionals, their departments, and the Sri Lankan institutes which should extend benefits beyond the program itself.

Another example is one in Indonesia where a five year program was devoted to establishing a new multimedia and communication center to support a variety of distance learning programs operated in Indonesia by the University of Education. As part of the program, a variety of staff development and training programs were implemented. Most of the short-term non-degree programs were provided through arrangements with institutions in other Asian countries and by using long- and short-term technical assistance to teach courses and seminars in Indonesia. The long-term Masters and Ph.D. degree programs, however, included sharing the responsibility between the USC faculty of Education's Educational Technology Center and an Indonesian

Training College so that the specialized communications theory and production courses from USC would be integrated into the Indonesian institution. The objective was to enable the students to continuously function in their jobs at the new center while still pursuing an intensive degree program. Again, this program was able to tailor the degree training and staff development investment to the program objectives and strengthen the commitments of the students to their jobs and the program.

In the Indonesian case, this degree program also strengthened the Indonesian institution. Again, the TA and training programs were better integrated and strengthened the overall program effort.

These are relatively simple examples of ways in which the traditional inputs of TA and training can be strengthened. More creative attention to the methods of educational assistance delivery is the challenge for us.

As we proceed in this conference to address the need for new directions in educational development and international cooperation, I hope we can debate and discuss these tendencies I have cited so that:

1. We, as educational development officials, establish new allies and partnerships with the education establishment in the countries we serve and find new linkages with our colleagues in other sectors.
2. We design and implement projects with significant attention from the outset to ensure dissemination and adaptation of the success we achieve.
3. We apply equally innovative changes to the ways in which we deliver educational assistance in balance with the kinds of innovation we advocate.

ON A MEETING OF THE

"SPIES OF GOD"

Jaime Benitez

In the first place, I would like to thank my old friend Alvin Eurich for pulling me away from my classroom in Puerto Rico so that I may speak to you and for throwing me into the midst of what Shakespeare would call "a meeting of the spies of God." I feel very much at home in this dangerous company gathered to "take upon 's the mystery of things/As if we were God's spies." Everyone here is, after all, engaged in the subversive activity of trying to uncover and, if possible, help to bring into fruition the world to be. Not the unconscious continent of which Hamlet spoke, but the living world which you and I and our children are meant to help bring forth, each in his small or big way, ten, 20, 50, a thousand years from now...if there is to be a living human being on earth a thousand years from now.

The great Spanish philosopher, Jose Ortega y Gasset, was deeply concerned, as we all are, with language, communication, and misunderstanding. He used to summarize the source of that confusion in which we have been engaged the last two days, in a Latin saying. It translates, "If two say the same thing they are not saying the same thing." And we have experienced this while talking about "education," about the "First," "Second," and "Third" worlds, and all those other expressions, even the term "university."

Ortega would go on to say that Europe grew great by identifying numbers as the language of science. Numbers and mathematics led us to become what we are. The great fundamental revolution was the scientific revolution which brought us to our present reality. It has created this one world which, somehow or another, has been divided into three worlds...into five worlds...and possibly into no world.

And it was precisely on this particular issue, clarity, that we were told of the great advantage computers have over radio and television: computers do not afford us the luxury of confusion. But the basic fact is that while this is all very true, confusion is inevitable in our present situation. Our task here is to try and see how we can overcome the confusion of not being certain as to what aspect of the world's words we are referring.

Let me make another observation which will help to clarify this dilemma. As I was preparing for this meeting, I was deeply gratified when I read that Amy Carter had braved going to jail, and did so with her father's consent, in order to join the protests on

Embassy Row against apartheid policies in the Republic of South Africa. In 1977, while she was a child in the White House and I was a visiting scholar at the Woodrow Wilson Center, I didn't like her very much. She seemed to be too assertive. But all that changed two weeks ago when Amy's assertiveness reflected human solidarity with the downtrodden and willingness to challenge the established order on their behalf.

My mind went back to another young lady, Antigone, born many centuries ago in Greek mythology. She staked her life upon the premise that we are bound more by the ultimate rules of ethics than by the arbitrary imposition of power. And, although Antigone gave her life in that piety, she lives forever in the hearts and in the minds of millions of people throughout the world.

Fortunately, much has happened in the Western world since the glorious days of Athens. Amy is back in school. But there are many more million men, women, and children outside that privileged portion of mankind, who suffer unnecessarily but relentlessly the oppression of want, of fear, of hunger, of ignorance. This is an immoral and unacceptable reality when the means and the resources are available to help rectify such social injustices.

For those of us who have been nurtured upon the proposition which we again read yesterday, with some irony, in Williamsburg, "...that all men are created equal; that they are endowed by their Creator with certain unalienable rights; that among these are Life, Liberty, and the pursuit of Happiness...," there is a moral obligation to help others overcome their present inequalities. And, when I refer to Williamsburg, I think of Thomas Jefferson and of how, now, his words of 200 years ago are changing history. I belong, historically, to the Iberian Empire, to Spain and to Portugal, many years back, before the world began to discover new realities throughout what we call, by mistake, "America." I thought a little bit further back, and there was Buddha, and so many others before who provided a background for pride, for history, for affirmation of the values of man. Our friends here from the house of Egypt were a little bit earlier still.

I was reading here someplace, "What can be done?" This question is the task that has gathered us. There are many answers, all of them difficult in the basic sense because all of them, in one way or the other, involve upsetting the established order. We were reminded yesterday by Dr. Eurich that upsetting the established order is the function of education according to George S. Counts, who was one of my teachers many years back. But how is that upsetting to be done? To what purposes? By whom? At what speed? After several stories we heard last night, it is clear to me that I must proceed in parables.

Twenty-five years ago I went to Berlin with the "Best and the Brightest" of the Kennedy team, with Schlesinger, Galbraith, and Rostow. One night we were the guests of Willie Brandt, then mayor. As we sat by the Rhine, I mused to our host, "I am impressed by how similar Germans and Puerto Ricans are." He turned his blue eyes on me and requested, "Please, explain."

"Well," I replied, "we are the only two people who receive assistance from the United States and don't feel offended by it." And that is one of the fundamental issues that is involved here.

My friends in Puerto Rico were asking me, "What are you going to Virginia for?" I replied, "Well, I am going to talk to some friends on how to give aid without offending and how to receive it without feeling humiliated." And so, when Mr. Wickert told us that Germany was destroyed and liberated at the same time, he was right. And he was making a reference to a situation in which, in a certain sense, all the world finds itself, and perhaps particularly the so-called "Third World." Now we are all liberated from a destiny of injustice and the established order.

All this is prelude. Dr. Eurich wrote and asked me if I would speak about Puerto Rico's Operation Bootstrap, and I forgot that letter. It was only this morning when I was beginning to work out my themes that I saw that this was my theme. So I will improvise from here on.

I am reminded of an experience that I had in 1949, coming to the United States by boat with the then elected Governor and great leader of Puerto Rico, Luis Munos Marin. He was going to Washington and I was going to Austin. He was going to discuss the future of Puerto Rico and I was going to participate in the discussion of the bicentennial celebration of the birth of Goethe...I was with the Germans and he was with the Americans.

Journalists were all around and they said to Munos Marin, "Governor Munos Marin, we have to write a story for the newspaper tomorrow and we want to make it on the front page. Could you summarize the history of Puerto Rico for the last ten years in a paragraph?" We all felt offended, but Munos Marin, who was himself a newspaper man, said, "Well, I'll oblige you doubly. I'll say it in one sentence. The history of Puerto Rico from 1939 to 1949 is the transformation from 'Operation Lament' to 'Operation Bootstrap'."

So that was it, and this is really what happened. We stopped crying and began doing the things that had to be done. And, as part of that task, it became my responsibility, in 1942, to go from an instructor for 11 years in political theory, sociology, and contemporary civilization to heading the University of Puerto Rico. Operation Bootstrap became the task of many of my other friends doing

similar things.

And I will just make one reference to the most important statement that I made then. It became the most controversial one in my whole 30 years of Chancellorship and Presidency of the University. I tried to put in one sentence what, in my judgement, should be the fundamental task of education. I don't repent that sentence, but I know that it facilitated all kinds of misunderstandings. My beginning statement was, and I recommend it for any of you who is going to be a university president, "I have accepted this large responsibility because I have profound faith in the potential of this body and of these students to serve the basic commitment of man in Puerto Rico." And then I would go on and say, "I have said 'man in Puerto Rico' and not 'Puerto Rican man'."

This essential unity of man comes first, before everything else. We are men before we are Americans or Spaniards or Persians or Indians or Puerto Ricans...Puerto Rico is the place where, as a man, I have been committed to do my job. And I think that this is precisely correct. As more time passes and the world becomes smaller and the village becomes a family, even as we are here, this is very true. But, it is again something which facilitates all kinds of confusions in the nationalistic era in which we live. There are some things, sometimes, that are better left unsaid...but certainly you must have them in your heart.

And this is the whole problem that we have been discussing here. It is quite normal that we should distrust each other. This is a factor which is facilitated by the unbalances and differences which exist among all of us. But on the other hand, I think that is essential to our task that we should have a basic conviction in our own legitimacy and the validity of our behavior and our actions. We must retain an expectation, if not an illusion, that the fellow we are dealing with, be he from the highly developed or the least developed community, has a claim on himself, on his own rights. Cooperation is not a charitable act, or something that one yields to because there is no choice, or a way of escaping from the dangers of the second world. It is something which fundamentally behooves me as a human being. And I think that one of the most difficult things on earth for the United States, for instance, is to build with the poor, with the weak, with the beginner, and not offend him.

I was educated at Georgetown University in the 1920s and 1930s, later at Chicago, and particularly at the University of Puerto Rico in the library. It seems to me that the United States is a much better community than it looks like, particularly to the outside world. Of course, I don't like your President at all, and there have been very many of your Presidents of the United States I haven't

liked. But, I do believe that there is a deep moral sense and a deep commitment to the fundamental principles of the Founding Fathers. Through the multiple ups and downs in American history these principles are a valuable resource, something on which one can and should draw as much as possible. I agree with one of my friends who said yesterday that the only way to really expect cooperation and receive it is with the basic awareness that this is a give and take proposition.

When we claim equal treatment in many aspects, as I claimed for Puerto Rico for so many years in Congress, we are enhancing our rights. But in so far as I was succeeding with my claims, I was threatening the moral authority of the United States. So this was a give and take proposition, and I was not yielding anything when I claimed for my people the opportunities, and the rights, and the responsibilities that are inherent in the fact that we are human beings and citizens entitled to be ourselves. I did this in understanding, in cooperation, and in respect, but also in self-affirmation.

This is not limited only to the people of the Third World, it expands to the First World. Let us not be too much offended when the United States makes mistakes. We, in a certain sense, should be proud that we can point out their failures, their limitations, and their deficiencies. But try and do it honestly, in so far as is possible, and in ways that can be understood on the other side without offending anybody. At the same time, we cannot yield our own self-respect and our own authority.

We come to many of the points that have been raised and discussed here, and I am persuaded that there is a balancing effect concerning activities. For instance, there was a debate as to how much the government should participate, or interfere, or call the shots, in this relationship of donor and recipient. It seemed that one of the trends of the whole conversation, which sounded to me quite intelligent, was that the developing and underdeveloped countries had to pay much more attention to government and the established order than did the highly developed communities. It was more probable, we said, that in the years ahead the cooperation and the understanding could come via private agencies in the United States. They are often times more loyal to the basic principles of the democratic society than are the particular political appointees, or elected officials, or governments. The recipient community, on the other hand, must often operate via the established governments because in our developing societies it is indispensable that the government have a larger role to play in the reorientation, restructuring, and redirecting of the community than private agencies.

One of the recent books in American sociology deals with the disappearance of the "public man." It is strange that the more important the United States becomes, the least representative of the best become its Presidents and leaders. And this was a point which Lord Bryce, one of the shrewdest observers of the Americans, raised many years ago: Why are the Presidents not very intellectual? Thank God, being a member of that particular class, I am happy that the intellectuals are not ruling the world. Often times we are very clumsy in the implementation of social aspects.

There are two other points that I would like to make before finishing. One is on the role of universities. The merit of universities is, basically, that they believe in a better world. That is what they exist for, to see if a better world can be achieved. Well, we have a better world waiting for us. Let us, as people who believe that the task of man is to improve society, work for that better world. There are enough such people around. There are a lot of crazy people in universities too, let's not make any mistakes about it, but by and large if you are able to distinguish between the crazies and the visionaries, it can be very profitable.

Now, the other point that I want to make is on this question of preschool children and mothers and how to help them. I think that is of the utmost importance. Cast your eye and your assistance, concentrate your help on that forgotten side of society, the women in developing communities. They are untouched treasures of dedication, of obligation, and of generosity that can be most useful in providing the kind of help most needed.

Dr. Eurich's letter, to which I have paid little attention so far, said, "What would you have done if you were to do your job all over again? What have been your mistakes?"

Well, I have had my few, not very many, but the few I have made were very big ones. The largest mistake I made as President of the University, and at one time really the person who directed education in Puerto Rico, was that I didn't pay all the attention I should have to the question of improving primary schools. I thought, in my innocence, that the thing to do was make the best possible university. We brought the best teachers. We benefited from the misfortune of other countries. We brought to Puerto Rico the leading professors from Republican Spain who, at that time, were in exile from the Franco regime, and others from Latin America, and some from Germany. We had first rate professors and we improved enormously the quality of the university. But, there was one thing which I didn't do sufficiently and that was concentrate on primary education and preschool children. Since we had a School of Education at our University, we should have done that. That is one of the things that

we missed and which we should look at now.

If I were to begin my life's job today in Puerto Rico, I would try and dedicate myself to the remaking of the primary schools. I am persuaded that there, in the elementary places, you really have the beginning and the sources for education. I would use all of this new technology you were talking about, the technology of computers and the technology of television, and all the other technologies, but with the profound awareness at the same time that I have to loosen the soul, loosen the potentials and the wings and the spirit of these young boys and girls. We must teach them to dream, to think of wiser things as essential, and, if possible, not loose sight of the basic fact that man is the ultimate measure of all things. It is our responsibility to bring out the best that there is in each one of us. When I say "the best," I don't mean the ethical best only, but the creative, the sense that we shouldn't leave this world without it becoming a better place than it was before we were born.

The one other thing that I would have done if I had been in charge of Bootstrap, the operation of getting industries, technologies, and knowledges into Puerto Rico: I would not have forgotten, or allowed to slip out of consideration, agriculture. I think that an agricultural potential in a place like Puerto Rico is something which we should improve and strengthen as best we can. We must have an interest, an awareness, a joy in the potentials of the soil and the things that can be created and brought up from the soil.

If I had been in charge of the industrialization of Puerto Rico, I would have been aware of one final, basic fact: that while it was alright to try and entice all kinds of corporations to come into our island, never lose sight that all of that was done for the people. "Alright," we must say, "we will cooperate with you and we will work together with the managers and the enterprises, but our primary responsibility is to society in general and not to any particular members."

Oh, the other thing I would be very much more aware of than we have been is the evils of change. The dangers inherent in transforming your society lead to disjointed alterations of behavior. We wanted to eliminate all that was wrong in Puerto Rico, but in the process of eliminating these wrongs we created conundrums. We should have known that the more problems one solves, the higher "mathematics of history" you enter. Greater complications are produced for your society. We should be, as Einstein often times said, "aware that solving one problem means creating two new and more difficult ones."

But that is the basic task and challenge. I am very proud to be with you, to have become your friend and count all of you as my friends in the common pursuit of learning how best we can adjust technology and purpose and basic moral and ethical commitment to a world that is meant to exist, instead of the one which does, in fact, exist today.

REFLECTING ON THE ISSUES

Faud Suleiman

A conference like this raises so many issues that are food for thought. My summary for this morning is not innovative, it is not creative. It is basically a reflection on what we've talked about: technology, international cooperation, development, and education. Each of these concepts is so complex that each one could require a conference by itself, especially education.

One of the things that struck me during our conference is the schizophrenia that we face as educators and as people interested in development. Maybe it is inherent in our assignment to life. And I also heard education being described here as a force for change; it is in some ways a force for change.

But there is another view of education which is not identical to the one expressed here. Education is a very conservative profession. We as educators conserve knowledge, we transmit knowledge, most of us do not generate innovation. We do not expect the majority of educators, as a matter of fact, to be innovators. Is it realistic to expect our elementary school teachers to be innovative and to be agents for change? In any society, developed or non-developed, where do we really expect innovations to come?

I am partial, my interests are in higher education. We do expect higher education to produce change. We expect higher education to produce new knowledge. We expect it to introduce innovation. There is emphasis on research in the university, but not in the rest of the educational system. So I would like to question the assumption I have heard time and time again that education, per se, is a force for change. It is also a major instrument that society uses to maintain the status quo. The main task of the educational system is to socialize the new citizen, to make him part of a homogeneous society, be it Puerto Rican, Egyptian, or whatever. We brainwash the child to become part of our society. We are agents for socialization, we are agents of the powerful in the society whether we like it or not.

Unfortunately for us in higher education, we have that other task to introduce new knowledge and become agents for change. Some of us, when we try to do that, end up out of jobs! We are often running against the task assigned to us by society and I think we should keep that in mind. That is part of the schizophrenia we face in development.

There's another thing that I heard here: values and value systems are to be preserved. Naturally, they are important for the continuation of the society. But how do you reconcile that with the

introduction of some basic changes? Some things ought not to be preserved. And some values that are dominant in developing society work against development and, therefore, it is the task of development to question those values and to change those values. I'll give you some examples.

In many developing countries working with your hands is something to be frowned upon. The ideal is not to work with your hands, but to sit behind a desk and hire other people to do work for you. How can you introduce basic change and innovation and industrialization and technology in a society if you do not introduce the basic value of using your hands and working hard? I'm not sure that our emphasis on preserving all values of the society is well placed. Only those values conducive to development ought to be preserved.

Another basic contradiction, to which Dr. Benitez alluded this morning, is the role of the government in a developing society as contrasted with its role in a developed society. Governments, no matter where they are, share certain characteristics. But it is also true that developing societies' governments have greater influence on development. In the United States we have private constituency groups to which an individual can belong. You do not see that kind of institution in most developing societies. In many developing societies you are inhibited from joining any group, period. We talked yesterday about the use of the private sector in the United States and its counterpart in developing countries. But you are going to have a difficult time in many developing societies finding non-governmental organizations with which to work, or at least ones that are important enough for development.

Another set of contradictions that we have to deal with is just how important donors are to development. We've spent considerable time here talking about that. But with all due respect to the World Bank, AID, and other organizations, development is basically the responsibility of developing societies.

We talked about the "will to develop" and some of us could not feel it or identify it clearly in many countries. But in every country on the move, development did not come from the outside, it came from within. Occasionally it comes with revolution. Other societies have developed without using force and maybe that is the emphasis we, as people interested in development, ought to pursue. How do we change a society with minimal destruction to that society? Destruction is inevitable. It has to come. The question is, can we minimize it?

I said that it is my view that the responsibility is with the developing countries. If you look at education you see that most

funds going into education are not imported. All of the external assistance, no matter how you define it, grants, loans, gifts, and what have you adds up now to about seven to eight percent of the budgets for education in developing countries. That may be a significant percentage in some cases. As external consultants, we often act as catalysts for change, but we know we are not the decision makers. We cannot make development happen.

We talked about collaboration, whether it's good and to whose advantage it is. Let me reflect on this business of external assistance and international collaboration. One of the things that you see happen more and more is the confusion over roles of the major players in international assistance. It used to be much clearer. The World Bank was mostly interested in buildings and equipment. Foundations were interested mostly in innovation and technical advice. But is that really the case today? The Bank today also provides technical assistance. They have established a mechanism for it. Binational assistance builds schools, gives equipment. So where do you go now? Do you go to the Bank or do you go to USAID? What do you go to them for? I think that our life was easier 20 years ago!

Countries give aid only partially for humanitarian purposes, only partially for developmental purposes. Governments have other reasons why they give assistance and we should recognize them. We have among ourselves here, among the 20 people who attend this conference, basic agreement on international development goals. That is because we are here as technicians and professionals, not as political agents. If I were representing the government of the United States of America, I might have somewhat different views.

This causes some confusion for the recipients as well as the donor. These are the contradictions of power and purpose. To us it matters little what the objectives are of the government giving the funds. To us as practitioners of development, we would like to use those funds to maximize development.

I'm not sure that bilateral assistance is much different from multinational assistance. There are a number of countries that would prefer to go to multinational agencies because it is safer politically. The Bank at least does not have the image of a major political power that is trying to dominate a country. But major powers still have influence through the World Bank. They still have influence through the International Monetary Fund and other international agencies. A recipient country puts itself in that untenable psychological position of begging for funds. And the psychology of begging for funds transmits itself from the political leader to the educational leader.

Although I have said that it is the primary responsibility of

the developing country to establish the agenda for development, I am not sure whether this is realistic. Many times developing countries need assistance in determining that agenda. Part of the development reality is the weak structures for planning in developing countries. They have few people in government who are knowledgeable enough and experienced enough to make wise decisions. They need initial assistance in talking through the alternatives and clarifying the issues. And I see no reason why external assistance should not be given to develop planning capabilities.

These are some of the contradictions I see in our business. Of course international collaboration is to be encouraged and we have some good examples of it right here. We have 20 people attending this conference. We have people from 11 countries. We have people currently working for four governments. We have officials of two non-governmental organizations.

But the reality of life outside this room is not global collaboration. The reality of life is national chauvinism. The number of countries in the world is increasing, not decreasing. Large political units are being broken up into smaller political units. In many countries linguistic groups want to have their own educational systems. India is faced with that problem, and so are Canada, the United States, and many African countries. This can be positive. Educational variety is something to be encouraged, at least to some extent. But when you start talking about a particular country, educational diversity is costly in human and financial terms. Should we as educators encourage or discourage trends toward local educational systems?

Despite contradictions and problems the prospect for education is encouraging. Worldwide development of education in the last 30 years is significant. There is global decrease in the rate of illiteracy. There are more numbers attending schools than ever before in almost every country; I hope there is growth in quality as well. I'm thankful to you, Dr. Benitez, for bringing up the ultimate goal of development and for emphasizing the moral aspect of international development. It is the quality of the human being we are trying to develop. Quite often countries, donors, agencies, and actors on the international scene forget that.

III.

VOICES FROM MOTON

The real substance of any conference such as Moton flows from the interaction and responsiveness of participants. Each invited guest, whether speaker or not, brings a wealth of experience and personal perspective to the issues discussed. No summary can capture the flavor of interchange, the concreteness of a thought fresh from an experienced mind.

This section of the proceedings attempts to record participants' thoughts as expressed in the sessions. We have transcribed selected tape recorded comments, rebuttals, and support for various positions expressed throughout the conference. We have taken only three liberties with the material. We have not identified the speaker because we wish to respect the privacy of each participant. We have selected those comments which we feel best express a given line of thought. We have edited the transcript only for transition from often impromptu comments to written document.

The remarks are taken out of context, and often out of sequence. They are presented here as independent thoughts. Any relationship to the immediately preceeding thought is coincidental. They have been grouped under the three broad themes of the conference: New Directions for Education in Society, Technology, and Collaboration. Individual comments do not represent the opinions of the Friedrich-Naumann Foundation, the Academy for Educational Development, nor a consensus of the participants' views. Rather, they are truly personal in nature and substance.

THE ROLE OF EDUCATION IN SOCIETY

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I wanted to pick up on the question you asked about, "What are we living for and the role of education...," and get back to it. I think that there has already been at least a hundred years of experience with the West in some parts of Africa. Even more with colonial powers and colonial education and expectations. What people say they want out of life is to have a good job. It may be a civil service job and status. They see conventional British-type education or an American certificate as a very important vehicle to get to that. We place a lot of students from Africa and we go crazy trying to find some piece of paper that we can give them when they don't finish their four year program.

But the problem that we are now facing in Africa is the constantly diminishing resources. When we talk about improving the efficiency of what we can deliver, educational television for example, then the problem is that while it makes sense, we can't afford it. To introduce educational television is a commitment over ten, 20, perhaps 100 years. The resources aren't there.

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The point I wanted to emphasize was suggested by the reference to the land grant colleges in the United States and their transfer of experiences, assistance, and examples to other communities. I think that one of the most difficult problems in developing countries, the receiving countries, is the problem of hostility. We know the basic nationalistic traditions are inherent in all of the post-colonial reactions. How can you help without offending, and how can you help without producing a grade of hostility? At the same time we must dodge the other critics who claim that those who are receiving the help are catering to new masters. I think that one of the important factors to help in this whole situation is when the donors come in a non-offensive way through a competent agent, which can be a university or some other group which will not be making money in the process. I would think that one of the important and valuable things that can be done, particularly when there are organized private structures, is involving them in most of the help that could be transmitted to developing countries.

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The first President of the Federal Republic of Germany, during a visit to the United States, during a speech to the Congress, said that Germany after World War II was destroyed and liberated at the same time. Now, I mention this as a kind of provocation to our Third

World guests. If I look at the pictures, if I read how destroyed Germany was, in every sense really destroyed, socially, 50 million people killed, no traditional structure working any more, no structure at all working at that time, physically destroyed...is this not the same situation that many developing countries were in 40 years ago when they were destroyed and liberated at the same time by colonialism? Obviously, the Federal Republic of Germany today, in many respects, is in better condition than many Third World countries. Why is that? Has this to do only with the Marshall Plan and with money? Has this to do with education, or with reeducation? Why has the development been different?

It's a kind of provocation, as I say. But I think we could learn something from openly discussing it. The American plans to rebuild Germany carried through against the Russians, against the British, and against the French who had all different plans and did not want a revital Germany. The Americans succeeded with the help of our people because, obviously, our goals were the same. The world of today takes it for granted that Germany is an industrialized country, it is a democratic country, it belongs to the rich countries, and so on. But nothing has to be taken for granted. It could easily have been different.

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How much participation was there by German institutions in planning the recovery? There was the fact that there was virtual military occupation by the United States.

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I wanted to give an answer from my side to my own question. I think the big, major difference between Germany and the situation of developing countries is that there then existed an enormous will on both sides for development and reeducation comprising political, economic, and scientific areas. Everybody at all levels of society in Germany tried to do their best to help and to develop. Every level really, inclusive to the universities. The American helped to get the Jewish intelligence back to Germany after they were in exile in the United States, in the universities of the United States. The situation is as bad in many countries, or even worse, than it was in Germany. Of course the world has enough resources. We have enough knowledge. In fact, we could all share in the wealth. But we don't do it. And we don't want to, maybe. And this, I think, is the point where I want to bring you.

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I like that. That's clear, the "will to develop." When you travel in many developing countries of the world you do not feel it. You do not get that sense of national will. In some places you do. You go to a country like Saudi Arabia and you feel it. You go to a country like Jordan and you feel it. Not identical countries, but in many ways similar culturally, historically, linguistically, different politically, but there it is. How do you explain this will? How do you generate it? Is it part of the donor's responsibility to help generate, or is it part of the obligation of the government to generate? And development, regardless of how you define it, is basically generated by people in those countries. You can help, but you cannot import development. It has to be felt locally. Any development begins up here in the head. And there's a difference between development mentality and undeveloped mentality.

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Many African development plans do not work out the way they have wanted them to, but some countries have managed to keep people on the land, for example. You haven't seen the mass migration to the city, as you have in other countries. They are feeding themselves at a nominal level, and this a period of development! One thing Africans always say is that they have time on their side. It is true. They're not in a hurry. We want them to show visible signs of development according to our own measures and we're not seeing it. Now, I would agree that they are having some real problems. But I guess what I am saying is, when we keep talking about the will to develop as an internal thing, then I say that even with that will development may not occur. And that's when we all have to get involved. This is where donors get involved.

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I think there's another point. I have seen one enormous change which is very important and that is the pride that Africans now take in being African. Not second rate, like under colonialism, not the one that taught them that they were not capable.

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I was born in Palestine. After 30 years of British occupation we had 15 people who were college graduates; 30 years after independence we have 75,000 college graduates. I am not willing to say that because of 30 years of British occupation we all developed this. I doubt it very much.

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In a sense, I think the problem lies in the assumption that education is agreed upon by everyone to be an obvious and important and absolutely necessary central factor to development. Education is believed to cause development, and more education is always good and all we have to do is to figure out how to do it better. Essentially, you view education as the solution to all the problems there are. If you have a problem, how do we solve it? We fix the curriculum. That's what I call the "curriculum fallacy." I think, maybe, as we look at educational resources, we should recognize the fact that we can't even support what we are trying to do now. Maybe one way to approach the new direction that we are trying to find here is to ask ourselves to set priorities for what education should be doing and can do. I guess what I mean is that education cannot solve all problems and shouldn't be asked to solve all the problems.

Now, we go at this in a couple of ways. Essentially there are two kinds of efficiency: the internal efficiency and the external efficiency. AID, in recent years, has made a consistent and large scale commitment to addressing the problems of internal efficiency. I think that perhaps we also need to redefine what the educators call external efficiency. In other words, the linkage between education and society, what things we can realistically expect from our education system, and what things we cannot realistically expect from our education system. I suggest that what we need to do is to look much harder at what the school systems really ought to be trying to do and, more importantly, what they should not be trying to do. We've heard lots of ideas of what schools should be doing, and it all ranges from moral, spiritual leadership to developing skills.

All these things! Everybody has an agenda for the school and there are new agendas all the time. Well, particularly in a developing context, kids can't begin to do much of that. In fact, they can't even do the basic tasks, whatever the basic task is. With only half the kids in primary school, three-quarters, or whatever, we need to say to ourselves, do we have the basic resources? They are getting worse. Yet, we continue to sit here and discuss education as though it could solve all our problems. And then address the issue of what other education methods, or what other institution in society, could better and more properly address some of these other kinds of goals. We cannot do it all with education.

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I was in India in 1951 and had a session with Nehru. I began raising questions about education. He just shook his head and said, "How can you talk about education when people don't have food in their bellies?" That led us to a discussion of agriculture and the

importance of developing agriculture education. In other words, there are more specific kinds of education that he was concerned with. And, following that, the Ford Foundation put $15 million a year into agriculture development for about a quarter of a century.

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Even though we have some problems, some reservations about the status quo, the fact remains that school systems are in place. Whatever they are, good, bad, or indifferent, they are there. They just are there! Governments are spending 20 percent of their national budgets and the impression one gets now, according to the federal government, is that they cannot spend more. Even that is too much. Expenditures on education are declining. Millions of children are outside of the classroom and in the street. I think that we will have to make some decisions on how we can improve the situation. Something useful, practical, something less than the revolution we cannot make is needed. That I don't think anyone can do. What can we do to make the situation better? Get more children to go into the classroom.

You did ask your question, "What could schools do?" Look into the situation of primary schools in a number of countries. I think we have been asking them to do too much and too many things. Prior to the last analysis primary school probably will end up doing numeracy and literacy; if they do that well, that's already good enough. Can they do that? What should we do to make them do that? Are there other ways of doing that, cheaper ways?

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I think we should have an honest discussion on the issue of what kind of society a country wants to have in 30 years. I have no problem if someone says, "I want to have a communist society in 30 years in our country," or a socialist, or a liberal, democratic, Moslem, or whatever, as long as this system is able to feed their people and as long as the system is able to provide basic needs and is based on human rights. Yet this policy dialogue still does not take place. No country is willing to discuss with any other country the kind of future they would like to have. As long as there is no dialogue on the kind of world we want to have in 30 or 40 years, as long as this doesn't happen, we don't have to talk very much about what education can achieve. Only by knowing this can you find out what the formal school could do, what the nonformal system could do, what an international system of education could do, or what any kind of other agency of socialization could do.

I think you are suggesting that the Third World countries, or those who come from those countries, really have a different way of looking at some of the problems than how you in Germany or the United States look at the problem. We think almost in the same terms as you think as to what kind of life we want. That is not the question. The question is that a large number of people have to face their life on a day-to-day basis of living and procuring food for the next meal. What do they think of their life? And if one has to answer the question of education, whether it is in agriculture or it is in health, how far can education become one of the components of those programs? So the question of delivery and incorporating education will have to be tackled both on the formal level and in programmatic terms. I mean, just to give a couple of examples, how, even in the so-called illiterate situation, can agricultural extension become a dynamic educational hope? We have a private voluntary organization that reaches almost five million households in a program of education and training on a one-on-one basis going from village to village. So the question is on several levels. How can education in developing countries become an agenda for every political activity? Some education will go on, and, as a matter of fact, much more development education goes on beyond the formal education of the system. The question is, can we strengthen that political system?

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I was in a similar conference in London in December on sub-Saharan Africa and some of the same questions were raised. My feeling coming out of that was that the Africans did not have this great unhappiness with the educational system, but that they related the inefficiencies of these systems to the inability to manage. What we ought to be focusing upon is: How do we teach management skills, and not just to managers? How can those skills be built into the curriculum and in the experiences of kids as they grow up? Just recently there was a meeting in Paris of the major donors in support of Africa and they came up with the same kind of conclusion. We must work upon development of management skills. Perhaps it ought to be established as a separate sector so that it doesn't fall under the various other development sectors.

Education in developing nations is a selection agency. It is a sorting mechanism for who is going where in that society. It is essentially a mechanism for taking a large number of people and funneling down to a small number of people and putting them at different levels. The curriculum and the structure and the method and all the activity of the school system function primarily to select who

is going to the next level. Now you can count on one hand the number of countries in this world that face this issue with any sort of honesty. Here is a single overriding issue that all countries face. It is highly political, explosive.

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I believe that we must create in the student an awareness that the school is just a step to continuing learning, that you just learn to continue to learn and that your formation and your service is just a springboard for other things. Another thing is to provide the school with basic ethics about social responsibility.

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I know one country where radio stations produced educational programs directed to jobless urban young people. The result was that these people became aware of many things that the government didn't want them to be aware of. This program turned out to be successful and listeners wanted jobs and self-employment. They grew up a force, a political force of young people. Hundreds of thousands of people who wanted to change something and who wanted to achieve something, and this was not what the government intended. If you say there is someone in charge of education and he has only a B.A., then maybe there's a professor who has the knowledge but he is in prison because he is not acceptable, with his knowledge, to the present government. These things also should be honestly included. Usually a country has many more resources than the political man in power allows to be used.

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I want to lay more emphasis on primary education because this is where the most important part of the child's life comes and we do not really give him enough education, basic education. I do not mean by basic education "vocational training." No, I mean basic education, so that when he leaves school after a certain number of years he would face life. Sending him to preparatory education as we have, and then to the university if he gets enough of the fundamentals, then he should really face life after that. We are not putting more emphasis on preparatory education and the university because we cannot afford all this if an over-populated country like mine sent all these people to universities. We have free education from kindergarten to university, and then we can't find jobs for all these people, so I think if we give them this particular emphasis, I mean more stress on this primary education, I think we can solve so many of our problems.

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I was going to add that it seems to me that the education of girls is critical because what you get with this emphasis on basics is a continuation of the pattern you have, especially in many African countries. Girls get only primary education. As they go up the ladder, they funnel girls out so you have a tremendous waste of resources.

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I think we need to focus on strengthening the system for securing accountability. Very often what passes as mismanagement in some developing countries is not really mismanagement, but it is setting in place an efficient system of managing the allocation of resources.

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I think another element here, and one that is very important, is an organization or mechanism with sufficient resources and an interest in the outcome. Let me illustrate.

We, some five or six years ago, carried on a little experiment in Stewart, Florida, teaching kindergarten and first grade children to read with the use of IBM computers and IBM typewriters. These were primarily minority children who traditionally were in the lowest 10 percent in reading. They were taught to spell words phonetically. As they heard them, they saw their own spelling on the screen. In one year they improved their reading from the lowest ten percent to the upper third in reading. We were using IBM typewriters, so IBM became very much interested in this. Last year they sponsored an experiment of 10,000 children across the country, which they financed and they had similar results. So this year, using the sale of their own equipment, this work is being carried on with 150,000 children in the United States. It's the biggest single program in elementary schools today. All this happened in five or six years. But here you had an organization that was interested in the outcome, had an interest and it continued to grow so they'll reap profits from it in the future.

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So much effort is fed into simply trying to prepare and train teachers who themselves have had very little basic education. They may be simply primary school readers. I know that is a very difficult program, but I think that the future of education has to do with upgrading. It results in much more rigid learning rather than creative learning. The other is a problem which I think the African educators stopped dealing with in the past few years, but I think it's time to come back to it again, and that's the problem of language.

English there begins some time in the third year and children can't handle it.

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Teacher education is a serious problem because in most developing countries the teacher cost is probably 90-95 percent of the national education budget. Teacher training simply has followed the way teachers are certified in Britain, or in France, or in the U.S., and, therefore, a qualified primary school teacher has to complete a two to four year training program after high school. When you asked some policy officers, "Why don't you take a good high school graduate and give him six months of training and let's see what he can do?" No way. I just wanted to point this out. That's number one. Number two, what good is it to train a teacher, which represents 95 percent of the current cost, if we do not provide him with a little support to make his teaching more efficient?

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I think that the basic question we haven't faced, really, is education for what? We are dealing in many developing societies with highly unjust societies, at least by the standards prevailing in the West. There are elite groups where a very small section of the society controls, manages, and directs the structure and the real problem is the way we want the primary school to support that. Do we want them to ignore that fact? Do we want them to develop a basic reaction against the social and human injustices that prevail throughout the underdeveloped world?

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I'm just glad I'm not the Minister of Education that has to deal with all this.

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There is one training program that has always impressed me. The first thing the planner did was to take the current learning and to turn it into seven golden rules. Those seven golden rules were then taught to a large group of young women who became the teachers. These women then went out and individually went house-to-house in villages all over the country. They went to every single house in the village and sat down with the mother individually and taught the mother those seven rules.

Up to now there's nothing terribly innovative in this. The innovative part of the program was that three to six weeks after this teaching was completed, another group of supervisors would come into

the village and they would, at random, select a certain percentage of the households. They would test those mothers on how well they did in learning the seven rules. The pay of the teachers was dependent upon the test scores in each of the communities. If the community didn't learn very well, the women didn't get paid. They did not get paid for going to the village. They did not get paid for conducting classes. They got paid for learning results and that became a tremendous stimulus to these young women to say, "How can I be a better teacher?" To me it illustrates a very interesting point. We must add accountability to learning. As educators we should be accountable, not for being in a place and doing something, but for having achieved something in terms of learning.

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We need assistance in science education, an incorporation of science in our educational system. If you are to compare the textbooks, let's say in the elementary grade in a developing society with the textbooks in Germany or in the United States, I would venture to say that one of the things that would strike you most about that textbook in a developing society is the absence of scientific concepts or, if there are scientific concepts in it, they are outdated. One of the major problems we are facing is the need to update our textbooks. It takes eight to ten years in some societies to write a new textbook.

The other thing I hear is some aspect of vocational or technician training programs. Many of these societies, and the World Bank Study has again emphasized, have spent quite a lot of money on higher education. For a variety of reasons, higher education has received an unusually large percentage of the educational budget and a lot of these countries have developed reasonable systems of higher education. South America, for example, and now the Middle East is following right behind. So what they looking for is not necessarily the college training manpower only, but also the support staff. Well, where do you get them? You can get them in vocational secondary schools, or free vocational elementary level schools, or post-secondary vocational schools, but some aspect of vocational training is the other thing that I hear most often.

The third thing you can classify under the management of the educational system. How do I organize, how do I plan, how do I promote, how do I recruit all aspects of management to the educational system? So management is generally the third one.

And for the fourth one, again relating to science and technology, is the belief that gadgets are somehow related to development. They look at developing society and see greater use of machinery whether it is the computer technology, communication

technology, or instructional technology. And they would like access to this technology. They would like to be able to prepare them, to utilize them, and this is one thing that I think developed societies need. Population is increasing three and one-half percent. I have hundreds of thousands of new students every year. How do I cope with an ever-increasing number of students? These are the most important problems I see.

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One of the reasons that the radio education seems to work so well is that, as in an example given, you are focusing on some of the things that schools do and do well. And you are not trying to inculcate broad attitudes and values. You are not trying to generate employment. You are not trying to do a lot of other things. You are picking the core subjects that the schools are good at and the things that, in my view, really ought to be done in schools. Teaching basic math skills and basic language skills are probably the two most important sets of skills that schools can teach and can be effective at when they are structured properly. And they're probably very cost effective in doing that. Certain kinds of basic education can be taught through radio, but nevertheless, it's a topic where school really ought to be. Those kinds of skills are not the kinds of skills that work well in out-of-school settings and in nonformal education. They are much harder to teach that way.

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Moser, who did work on agricultural development, cites a series of five factors that he says are the critical factors and five factors that he calls accelerating factors. Education is not in the critical five. It's in the second five. It's not the major force that is going to lead to agriculture development. It is a facilitating or accelerating factor, as he calls it. It helps if it's present. It is, in his words, necessary but no where near sufficient. You have to have the other things such as credits, markets, land, etc. So I don't think agricultural development is appropriate to delegate to the school or say it's a problem we want the schools to handle.

I think the schools take these responsibilities because nobody else was doing them and somebody had to pick them up. Suppose the government support that we give to schools was rather given to other social institutions. Then it would be removed from education. It would still be education, but not the formal system of education. And I would agree to that. And if that is not happening already in the schools in the developing world, if we see that as an evil or misuse

of the system, we want to make sure we don't transfer that. That would be one technology that we should not give to the developing world. Leave it in the churches. Leave it in other institutions.

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In higher education, we just kept inventing new institutions. We invented the liberal arts college in colonial days. We were essentially an agricultural community and the liberal arts colleges were doing nothing about agriculture, so we invented the land grant colleges that could take care of agriculture as a social problem. Then, later, science came along, laboratory science, and our regular institutions were doing nothing about that so we invented another special type of institution. And later in the century none of the institutions were doing anything about teacher education so we invented teachers' college. Then in this century we had a social problem because most of our high school youngsters could not be absorbed in the communities in jobs, so we invented the community college. So, throughout our whole history of higher education, we solved social problems by inventing new institutions.

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One country in Africa is using optical scanners as well as microcomputers in the tabulation of students' forms. In the last two years, this country has entirely put its education budget on two linked IBM microcomputers. This has had a very dramatic effect on decision making there. It means that the database on which educational decisions are made is no longer stuck off in a mainframe computer across town in the Ministry of Planning and Finance. The technical people immediately under the Ministry learn how to use them and how to structure the data for decision making. This country has a remarkable database compared to many other places, and that is a very important distinction. But, it was not available, it was not tangible, it was not really utilizable in day-to-day decision making. I mean data. I am talking about information on where students are, what the conditions of the schools are at the village and sub-village level. All of that is not immediately available to the Ministry. We are also talking about a Middle Eastern country where bilingual applications from English and Arabic and translation using the new microphone ribbon instructions to computer are going on right now. The Minister of Education is beginning to look at the applications there. It is really remarkable. It is not just tomorrow. It is happening at a very low cost today, which I would not have believed a few years ago.

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I have been really deeply impressed by this whole undiscovered continent that you have been talking about. I would like to ask a question. Is educational television broadcasting established already in the U.S.? Are public schools in the U.S. using it for educational purposes? And, if so, where? If not, why not?

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The story with regard to television in the U.S. is not a very happy one, as we mentioned last night in a little gathering in the lounge. Television is not used very much. I am pessimistic for its future here, in part because the passion for the microcomputer has now replaced it. Schools now want computers, not television. Computers provide them with a sense, which may be realistic, that they have more control. Teachers can make their own education programs if they are interested. In this country, I do not think that there is much of an immediate prospect for new educational television initiatives.

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Originally the reason I asked that question is that if you use television in the United States and develop it eloquently in the States it becomes much easier to have it utilized elsewhere and as has been pointed out, the frequency of young people attending the "television school" that goes on today everywhere is much higher than the frequency of them attending their classroom. So if they become addicted to television for many of these oral shows, might it not be extremely useful educationally? It really bothers me why the American system has not become attuned to that inevitable reality.

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Yesterday, the Academy newsletter came off the press. For the first time it was printed wholly by computer. Our editor has a computer at home. She put the entire newsletter on a disk, and fortunately the disk was compatible with the printing office equipment and the whole newsletter was printed at greatly reduced costs. Then as another example of technology not to mention communications, when my wife was collecting materials for her recent book, she visited Texas Instruments in Dallas, Texas, and late in the afternoon the executives gave a tea for her. The tea was served wholly by robots. Each robot went from one individual to another, right around the room.

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There is a question that comes up with technology, particularly in our countries. Will high technology go into the hands of the people? Will there be decentralized use of technology or are the particular technologies going to be used by central powers and authorities to control? I have a question whether the rapid expansion of one of Asia's satellite programs, which reached the level of one new earth station a day, was really meant for the people or for the politicians to win the elections? Sure we can keep on talking about motives, but eventually, if a technology is not tagged onto a strategic institution-building process then the technology has really hardly any particular usefulness. The best example is that even in the U.S. television has hardly anything to do with education, and probably the same will happen in many other countries as well.

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A teaching technique or tool, what television does in the preschool, for example something like Sesame Street, is having an immense impact not only in the U.S., but in many places around the world. That may be, in many ways, a more appropriate use. You will

have countries devoting resources to the regular schools, whereas the preschool needs a less expensive tool in order to get the children prepared for school. Also, with television use you do not have to look only to the U.S. The Open University in Britain has been very important. So there are uses of the television that have been profound, even if it is not used within the school system in the U.S. As a matter of fact, television in developing countries serves a better purpose as an open university environment rather than in a classroom. I think there are alternatives we need to consider.

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I am going to say some of my worries. The first worry I have is about advancement in the area of high technology, and the whole question is so vast. When we look into technology applications in some of the poorest countries, I see a major danger. The danger can be overcome, but I see a danger that we should be aware of. In many countries, we said, even the rudiments of basic information are not there. Now, is it possible that by pushing technology some of the basic things that need to be done will be left undone? I see that danger. The second area I worry about is that the change is so huge, so fast, and we push technologies to developing countries which become so soon out of date. You have a minister from a poor country asking for our advice. I know that in two years time what I say is going to be out of date. My third concern is perhaps a bit philosophical and perhaps, in this case, really may not be serious. The danger is of the gap between developed and developing societies increasing forever and ever and ever because the accessibility to high technology is being limited by developed countries. Perhaps what we are advocating and supporting is really an opening of the gap. I see those kinds of things that worry me.

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A couple of things regarding microcomputers. I think the concern about centralization of power in my experience with microcomputers has been the exact opposite. The experience of the World Bank has been that as the Bank goes to the field, particularly in Asia and to a lesser extent in Latin America, they are finding that their counterparts at the national offices have microcomputers and are using them. The Bank is scrambling to catch up. It is an interesting reversal. I discovered that what microcomputers do is make information individually accessible and individuals take control. Just like your example of the Minister, what we find is that all kinds

of individuals are able to master micros and use them. It is not just a first world technology. Microcomputers are now easily and readily available all over and in all forms in Asia. There is a whole micro chip industry in the backyards throughout Asia. There is a tremendous resurgence of people who build their own micro chips and sell them on the market. You can buy cheap machines in any major city in Asia. This technology is available and spreading rapidly. It is not true in Africa yet.

What I am trying to say, really, is that if we introduce technology without proper appreciation of what it is going to do in decision making and organizational decentralization, it is a misuse of that technology.

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Last week I attended a conference in New York. It was the Teachers' Conference. One of the lecturers came up with an idea that microcomputers are doing more harm to the students than benefit and, in the long run, the only ones who will benefit will be those who use and sell the computers. To my mind, and this is what worries me all the time with these elaborate new technologies, how far are we going to supply our schools with those elaborate and sophisticated things? We have thousands and thousands of pupils and teachers; how can I help those teachers in the classroom? My only and most important concern is to help the teacher and the student. I do not care who will benefit outside the school. How can I help it? How can I make education individually accessible? Is that possible? And if the World Bank or other donors would help me for some time with technology, how long could they go on helping me with that, and where could I use these machines in the fields, in the villages, etc.? This is not the help that I could really give the teacher. All the new technologies should be an aid, not a replacement of the teacher. They can never do that and they will never be that because the rapport, the feedback, the link between the teacher and the student is fundamental. This is my opinion.

I would go back to very simply technology because what is modern today in a few months would be obsolete. You would be asking me to do something else when I am just starting to know something about it. Every time something will come new from the new world, and then I am feeling that I am always behind. I am always running and trying to catch up. I would go back to the basics. I would go back to cassettes where a village child can just carry it home and listen. A teacher far away from the city could take it home and sit alone with

it and listen to whatever he would like and his needs are properly met. We are having television, but there are just a few, a drop in an ocean here and there. What can we do with a class of 60 pupils? Can you really stop them to watch a television, or use a computer, or some thing? We use computers in some schools, but this is for publicity and showing off and getting more school fees.

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I do not think we should consider the new technology in terms of replacing a teacher. I think a teacher is essential. It is a matter of new arrangements of learning to help the teacher manage. For example, we had to learn to use the textbook as a supplement. We did not always do so. I had a professor at Stanford University who wrote a textbook and each class period he read a chapter from his textbook. He was not using his textbook to supplement class, he was using the textbook as a replacement for himself. Now I think consideration needs to be given to all of technology. It's a matter of managing it properly so that the students can learn more.

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There has been a tendency, of course, to ignore television because it is too expensive and it reaches an urban audience, and because of the problems of energy, and etc. But I think changes are occurring and these are very important ones to consider.

First of all, at least in Africa, the continent is urbanizing at an enormous rate, sometimes as much as one-third of the population of a country now lives in the capital. Dakar 20 years ago was a few hundred thousand, now it is nearly a million and one-half people. Television is becoming more and more pervasive and even in small countries, by the end of the year, television signals will cover the entire country. Another important factor is that commercial interests have discovered television in Africa. These poor television agencies have been struggling to survive, and now they have discovered that they can sell advertising as a source of revenue and these commercial vendors recognize that there is an audience also in the bush, that the little village listeners who wants to buy designer jeans is a reality.

A tremendously sad example of all this is when the head of radio and television for a large African country was in Washington last summer. He asked me to help him buy "Nova" because he was very impressed with the program. You try to buy "Nova"! A remarkable science series, but even in the U.S. you will go crazy trying to buy

all the segments. It is a very confused marketing system. Besides it costs $2,000 a segment. So he gave up and bought "Dynasty" and it is being sponsored every Sunday night. What I am really saying is that we had great hopes for educational television and, in a sense, we have discarded it because of its expense. I am just raising these sorts of dramatic examples to invite to donor countries to reconsider the role that television may play in formal and nonformal and popular education. If not, I have a great fear that this remarkable channel is going to be gobbled up by the same factors and sort of control television in our own country has suffered.

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Really everywhere, but perhaps particularly in the developing world with these technologies changing all the time, one doesn't know what to recommend, one doesn't know if there is a commitment, whether they are affordable, etc. I agree that the solution is to develop the capacity, not the technologies; to develop a local capacity to learn how to use the technologies educationally.

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What frightens me is that if you go to a number of countries and watch the television they have now and you look at the programs, what do you see? News for a few minutes, some local folklore music of one sort or another, and then the head of state making a visit. But then you see whatever you see on American, British, or French television. You sit there for two or three hours. I am just worried, you know, from the long development perspective of the world. I myself am here and speak for myself. I do not want to see the world look like an airport, you know, to look all alike. I think the world will lose some of its differences and some of its interest. We should put more emphasis in local software capacity building. I do not mind that hardware is developed in the U.S. Everybody can't make hardware. But the software building capacity, I think we should encourage it totally.

It took 25 years in the U.S., more or less, before anyone put his foot down and made the necessary investment in the research to make decent software that resulted in Sesame Street. It took about $7 or $8 million in learning research to produce that. And the same with radio. The radio has been an entertainment medium and has been in existence for 60 years, I guess, more or less. It is only in the last decade that enough of research and investment has gone into software from an educational standpoint to begin to utilize that technology.

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Two comments. Development by anecdotes is not very satisfactory, I realize, but I happened to live in Britain at a time when television was just getting started. I lived in London and had the privilege of watching early television. It was disastrous in terms of all the things we are saying here and reflects pretty much the kind of thing that you are concerned about. I also had the privilege of living in India at a time when Indian television was just getting started. The same kinds of fears should have been expressed, because it was very much the same kind of experience. I remember travelling frequently through Japan when 90 percent of Japan's television was American broadcasting, American television with Japanese subtitles or sometimes dubbed Japanese. I remember being there very often with my children and we would be sitting in the Tokyo hotel room and watching the television and it was hilarious seeing the things they had watched at home. You go back to Japan today, television is a very different thing. It takes time and it will grow and it will change and it will become something else. But I think we cannot sit here and lament. There is nothing we can do to stop it. It is here, it is in the developing countries, more of it is going to be there and it is the country's responsibility, as well as the donor's responsibility, to be patient and to make the investment and to see that it is used in a most productive way for the country.

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Yes, I think the countries and the donors have a responsibility but I don't think we can build the capacity to deal specifically with the technologies. I think what it means is building research institutions and helping to create a pool of human resources in all of the fields that can then provide the kind of guidance to the countries as to what software design is necessary. I do not see how the donor can help any other way except to build this capacity, both institutionally and humanly, to cope with change.

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I think it is so much more complex a thing than donor policy officials simply agreeing. A lot of other things are going on, a lot of other players in this. Even if they were to agree, would there be agreement in the implementation of the project?

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If I could make a plea, I would hope that what the donors would work for is to ultimately provide the country the wherewithal in terms of institutional development and resource development to allow them to carry out their own decision making.

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AID's major contribution in the area of communications and educational technology, for example, has been to help countries explore applications, to carry out research and development activities and to assess their impact. In many cases what we have not been able to do is follow-up with large amounts of infrastructure, for example, for national television systems or national telecommunications systems that might have been demonstrated in our pilot projects. On the other hand, the World Bank does have those kind of resources for those kinds of facilities. But the World Bank is typically very limited in its ability to carry out experimentation and pilot activity. So there seems to be a natural marriage here that could work to the benefit of many developing countries. There is a positive view about that, I think, from both the AID and the World Bank standpoint. At the same time, we have not actually been able to put that sort of collaboration into practice.

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There are no solutions to development. We can offer no solutions. We have to offer collaboration. We have to offer certain techniques but the solutions have to be found on the spot where the problems occur and not somewhere else.

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I quite agree with you because our needs and our demands would be the only thing that could make us look for something. We can ask the world to give us what we want to have, but above all we should know where and what exactly you need. Where are you going to use them and in what areas, in what parts of the country are these things going to be used? We can look, we do have elaborate things and we produce them ourselves. We have this kind of cooperation and production, but we still need the things that are easy and the teacher can find them at the tips of his fingers whenever he looks for something to help.

But we are not going to wait for something that is sophisticated that after a few months will be of no use to him. He will be looking forward to something practical, so it is from our needs that we can find where the help is needed.

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This whole way of talking is very new. Development assistance began only 30 years ago, and a conference then created the term "Third World" for the first time. The major donor countries and institutions are exactly those countries who have for three or four hundred years been exploiting the Third World. To reverse this will take, certainly, a lot of time and 30 years is nothing.

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I wanted to raise this question: In order to get effective collaboration among the various donor agencies, doesn't there have to be some mechanism to bring it within the country? Or, does it just take place informally?

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I don't think it could ever take place except informally!

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How useful do we perceive it to be, and for what purpose, and who is going to benefit? I think the most important question is: Is this the responsibility of the donors or is it the responsibility of the country?

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The second mechanism for technology transfer which is being found in a broad way, but also specifically, is coming to higher education and research. The U.S.-Indo joint commissions and subcommissions have different elements but one is on education and research. They need to establish contact between groups. This is a different kind of collaboration.

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Here we are talking of education and we assume that technology transfer is either through USAID or the World Bank. If we are talking of technology and if we are talking of educational exchange, what is wrong is between institution and institution. How much free flow of information exchange takes place through that medium? I think this focus on donor agencies explains why the educational sector is so poor. Rather than really focusing our attention on donor contribution

we should focus on university-to-university and the private sector.

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I think that obviously the human potential, as far as I see it, is located at no better place than the university. As a matter of fact, what we are concerned with here is finding purposes for young men and women in developed countries who must identify commitment in excellence and in service and in learning, which in the 1960s was developed. You had the Peace Corps and a number of other activities. Hundreds and thousands of young men and women from this country became very much interested in service elsewhere, not only to help others but to help themselves in their own formation. I think that what we are dealing with here are possibilities for the future and I think that we can't ignore that enormous potential.

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We realize that what we have lost throughout all of this is institutional linkage from one university to another and the sister institution relationship that is very important to professional development. We are going back to looking at that again. How do we link American universities to African universities? Which African universities are the ones that we can develop to service regional needs even though they might be national institutions? Invariably, when I look forward, say to the next two years of development, we are going to start bringing these universities back in. You can be assured they will be land grant colleges because they have a lobby and because by law they are linked to our foreign assistance. Secondly, they will be universities that have maintained those linkages throughout these years without AID assistance. And they exist. Universities are very busy right now working in Ethiopia without the aid of American government support. The other thing is the commitment of this administration to aid the traditionally black colleges. It makes sense now to pursue consortia of colleges, linked with private firms, linked with voluntary organizations, in order to deliver these services.

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One area which I think has been forgotten is the role that the American university has played in educating foreign students. All of us know the pressure under which universities in this country have been suffering because of budgetary crunches. There has been a lot of interest in international education, international development, but there haven't been the resources, at least in the private institutions, for much opportunity for service along that area. I

think there has been interest manifested by individual professors, but they haven't had support.

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When I am sitting in this room I am not particularly interested in AID. I am not particularly interested in the World Bank. What I am interested in is the specific situation, the specific phenomenon of development as it is occurring in the countries in which I am living and working. We know, it has been documented, that the democratic, economistic approach to development doesn't work always. We had this very interesting paper by Jack Shepard which documents the failure of these development programs. We know that in some countries we have a database that a friend of mine calls the "gross national poverty." I was hoping when we started talking about collaboration, about donor agencies, that the issue would come up as to the responsibility of donors to monitor the harm of their purely economic approach. There are vast sums of money invested in it. There are institutions whose very existence is premised upon the continuation of these kinds of programs. I thought an alternative phenomenon which merits emphasizing is the kind of humanistic approach to development which is largely taking place in the non-governmental sector. This is the development of the human being by his or her own efforts. We also see that there are efforts going to develop new forms for political institutions in our countries, alternatives to the political system, etc. New forms of political institutions through which participation and accountability are achieved in those countries are beginning. I am willing to go along with the fact that countries which are so poor, where the human resource situation is so slender and so impoverished, that one has to take essentially a colonial approach to development and temperately provide the services. But that is not true of all development.

The second category of need is the very crucial need in developing countries to reeducate the professionals. In that I would very much include all of the bureaucracy of donor agencies. There is an important effort being made now in Europe. In fact, next month there is a most interesting meeting along that line, called by sympathetic donor agencies in Europe,the Finns, the Swedes, the Norwegians, Italians, and Dutch, to try to devise a kind of program for reorientation, reeducation of their own developmental bureaucracy. From a double perspective I see the need to crucially reeducate; I can be very blunt and call the education the unlearning process and the relearning process. Our development professional's need for this has been exacerbated by 20 years of development assistance in the field of education. Whether it is lawyers, or economists or doctors, etc.,

they are essentially a part of a kind of modernization education that was exploited in the 1960s.

The final important need which I think is a very crucial need in terms of long-term development is the need to setup educational systems which will better foster creativity. This goes all along the lines of social sciences, philosophy, physical sciences, and technology.

I think that it is relatively easy. It does not require much developmental assistance to help meet the educational needs of people in crisis and some of us in the Third World are working toward trying to do that. But when one moves into the second and third categories of educational need, that is where assistance is needed financially as well as in terms of linking intellectuals or other practitioners who can help develop new kinds of approaches.

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I am extremely skeptical that the private sector is going to do anything about the very fundamental problems of more dropouts from school, more adult illiteracy, more and more children who can't use basic mathematics. I am very skeptical that the private sector is really going to get involved in the school system. I think they are going to try, and maybe in remedial work with their employees. But they won't do the basics. I don't think the Church is going to take it over again, and I am not willing to apologize for focusing on AID and the World Bank. I don't agree with you at all there; I think they are very big players in the game of basic education reform.

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I think this conference is a good example for many of the things that you have mentioned. This conference wouldn't have been organized if not by two private organizations. It had to be done by us, absolutely necessary in this case that Americans and Germans began by looking to revitalize the private sector dialogue. We have here multinational institutions like the World Bank, we have the universities, we have private agencies. This will have an impact afterwards. It wouldn't have been done by governmental organizations, not by American, not by a German, nor by any other. I think it shows us that collaboration takes place. An appropriate analogy in our context is that we sit around this table here instead of having a television satellite system. I don't want to be ironic, but we used this forum because we thought it is more appropriate. Whatever else we need we need confidence in each other, and therefore we need the personal contact which one cannot build up in a two hour conference, but which hopefully we can contribute in a two or three day

conference.

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We talk so much about the lack of community resource capacity in developing countries, and I think we have been speaking of particularly poor countries who, yes, are in desperate need. In fact, in both our work with the universities and many of the development activities being carried out, there are many being carried out by thousands of people who are now very capable development professionals in many of the countries which we have called Third World countries. That, in fact, is an essential movement that has occurred over 20 or 30 years. I think we must be very aware. There are now very capable consulting firms ad educational assistance agencies, profit and non-profit, in the developing countries. A great deal of capacity now exists in local universities. They need to have the opportunity to be brought further into development programs in the industrial age. There are opportunities for partnerships. In fact, that is expected, equal partnerships. It is finally going the other way. The American institutions involved in development in many places are fortunately no longer in the driver's seat or the predominant partner. In fact, it is the other way around.

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I am very, very concerned that if the major donors continue on a course of competition, we are going to be, ten years from now, in a very bad position educationally in most developing countries.

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Could we go back, I'm sorry, 20 or 30 years to development? I'm wondering if the spirit, the nature of donor collaboration might have been different at that time. Well, now, wait a minute. We look at Germany. You said, did you not, that donors came together and decided with Germany what was needed to develop the country? In India the same thing happened. Donors came together with the Indian Government and said, "What do we need in order to make you self-sufficient?" Now I'm wondering 20 or 30 years after this period, what has happened to the nature of donor collaboration? Have we just ignored it? Does it still exist? What do we need to do?

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